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MARKETING ALTERNATIVES FOR AGRICULTURE

Is There A Better Way?

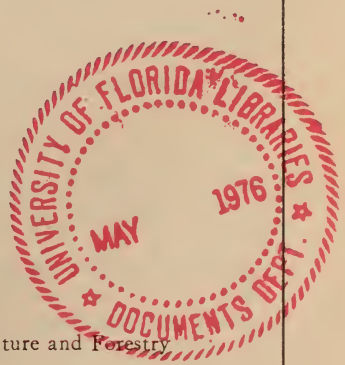
PREPARED FOR THE

SUBCOMMITTEE ON AGRICULTURAL PRODUCTION, MARKETING, AND STABILIZATION OF PRICES

OF THE

COMMITTEE ON AGRICULTURE AND FORESTRY
UNITED STATES SENATE

APRIL 7, 1976



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LETTER OF TRANSMITTAL

New York State College of Agriculture and
Life Sciences,
Cornell University,
Ithaca, N.Y., February 11, 1976.

Senator Walter D. Huddleston,
Chairman, Subcommittee on Agricultural Production, Marketing, and Stabilization of Prices, Committee on Agriculture and Forestry, U.S. Senate, Washington, D.C.

Dear Senator Huddleston: Agricultural markets and the basic agricultural marketing system have suffered numerous jolts during the past 3 or 4 years. I know you are acquainted with the situation as your Subcommittee on Agricultural Production, Marketing, and Stabilization of Prices has been actively investigating many of the specific aspects of the problem such as the boxcar shortages, and retail food prices.

The National Agricultural Public Policy Committee, chaired by Wally Barr of the Ohio State University, also recognized that our agricultural marketing system was under pressure and this committee recommended that an analysis of the situation and possible opinions be undertaken. Subsequently, an ad hoc committee of 26 agricultural economists from land grant universities and the U.S. Department of Agriculture was formed to assess the question, "Is there a better way for farmers to market their products?"

I am pleased to transmit the resulting papers to you for use by your subcommittee. They are written to be controversial and to provoke thought and discussion. They should not be considered as definitive nor final. The authors hope for feedback. Not only would this be beneficial to the committee in its deliberation, but would be beneficial to the authors as they continue to develop their statements. The ad hoc committee of authors will incorporate feedback to the extent it contributes to the issue at hand into the next writing. The intended final product is a set of educational leaflets which will be available for distribution and use by the extension services of the various states by fall 1976.

There are 12 individual papers. The first paper, "The Situation Now" attempts to identify the concerns that farmers, agribusiness and the public have about the marketing system, real or imagined. Each of the next 10 papers discusses one or more specific policy issues which could affect substantially the market options open to farmers. There are many contrasts among them. Some involve rather narrow and specific proposals of interest to a few commodities. Other proposals, such as the industrial restructuring paper, are bold, sweeping, even controversial and have implications for everyone in the economy. Some of the proposals suggest making the competitive open market

system work better. Others, in effect, suggest abandoning the competitive open market through the development of farmer group action and market power. Most of the proposals focus mainly on the domestic market, although one considers the possibilities of a more centralized control of export trade.

Each of the options discussed is believed to be an alternative consistent enough with the stated objectives of farmers to be worth consideration in some part and occasionally in all of agriculture. Second, none is presented as *the solution* for any part, and certainty not all, of agriculture. Third, this set of proposals is not designed to be the complete set which ought to be considered. Rather it is a sampling of marketing alternatives.

Three papers suggest institutional arrangements designed to improve market access, increase and improve the amount of information available concerning markets to farmers, and improve the process of value or price determination. They are titled, "Centralized Remote-Access Markets," "Forward Deliverable Contract Markets," and "Mandatory Public Reporting of Market Transactions."

The market institutions discussed in five of the papers would involve group action and, in some cases, substantial change in legislation to make more group action possible. The five papers are "Exclusive Agency Bargaining," "Vertical Integration Through Ownership," "Joint Ventures Among Cooperatives and Non-Cooperative Marketing Firms," "Marketing Orders," and "Marketing Boards." These institutional arrangements would be designed to obtain market access and to influence price stability through cooperative effort. The use of marketing boards and the expansion of marketing orders to coordinate the quantity and quality of production with market opportunities is examined. Marketing boards are discussed as a possible means of influencing international trade in agricultural commodities.

Two of the papers concern themselves with very broad regulatory issues affecting the working of much of the economy. The paper on "Industrial Restructuring: A Policy for Industrial Competition" is a sweeping proposal to change by legislation the nature of the competitive game by reducing the size of some of the large players. The paper on "Fine Tuning the Present System" includes a set of suggested administrative actions to improve the way the present agricultural marketing system works.

Implicit in each of the papers is the assumption that the establishment or the extension of the institutional arrangement will have direct and indirect impacts on the performance of the marketing system which would in turn have an impact on farmers' and consumers' welfare. Since the arrangements have not been actually tried, consequences presented are the authors' best educated estimates and thus must be considered as tentative.

On behalf of the ad hoc committee and authors I thank you, your committee and your staff for publishing these papers as a Committee Print. Hopefully they will provide the basis for a useful and constructive forum.

Sincerely yours,

Olan D. Forker,
Professor of Marketing and Chairman, Ad Hoc Committee.

FOREWORD

The American agricultural producer and the marketing system that delivers his products to consumers across the Nation and around the world are testimonials to modern technology and organization. The 215 million American consumers enjoy the widest variety of wholesome foods and at the most reasonable cost that any group of consumers has ever enjoyed in the history of mankind. At the same time, this American food and fiber machine has been able to supply a good share of its production to a hungry world.

On the whole, these achievements have gone unnoticed. We all have come to expect quality fruits and vegetables on our grocery shelves year around. We want choice beef, pork, and poultry every day just as we expect our milk, eggs and other products to always be fresh.

While the achievements are accepted as commonplace, the recent disruptions in this marketing system have not gone unnoticed. Since the first large Russian grain deal—the signpost of the changing situation—agricultural prices have become unstable and generally increased. In the nearly 4 years since the Russians came, we have also experienced a succession of unexpected and complicated marketing problems. The worst weather conditions in history played havoc with supplies in 1974, and the energy-crisis has totally distorted the cost relationships for production and marketing, to cite just two.

The persistent tight supply position and higher production costs have impacted on retail prices of food. The long-term downward trend of consumer expenditures on food as a share of disposable income basis has been reversed. This reversal has focused the attention of everyone on our food marketing system.

The Subcommittee on Agricultural Production, Marketing, and Stabilization of Prices of the Committee on Agriculture and Forestry has, for nearly 2 years, been working on this complex question. We recruited the Department of Agriculture and numerous scientists from across the country to prepare a descriptive analysis of our marketing system and established the functional costs of each of the marketing steps. In addition, we have compiled a large number of empirical analyses of the impacts of market changes upon consumers, processors, and producers. The subcommittee held field hearings on this question in Colorado, Texas and Kentucky in February and March of 1975. There we saw, first hand, the production, processing, and distribution of food products and also heard about the problems from dozens of representatives of every sector of the food marketing system including producers and consumers.

Because of the complexity of the issues, we are the first to admit that our findings are not conclusive. No single villain stands out. Nor can we suggest that increased costs are a short-term phenomenon. It

is evident, however, that the "system" is interdependent. It is also clear that without the system, the welfare of all Americans would be endangered.

Although no quick panacea is at hand, there are problems and a tuneup is in order. In fact, major modifications might be demanded due to the changing economic and technological circumstances.

However, any such modification must be done with care and with awareness of the impacts. As a result, as chairman of the subcommittee, I requested that the Department of Agriculture begin an assessment of current marketing practices and to focus on alternative marketing systems that might more efficiently deliver agricultural products to consumers. This effort is now underway and will provide needed information over the next 2 years.

This effort seems especially important because a large share of the increased costs of food and fiber is due to cost factors between the farmer's gate and the consumer's kitchen. In fact, about 60 cents out of every dollar consumers spend on food goes to market functions—for transportation, packaging, processing, energy, labor, and profits.

It also seems appropriate because of the distressing fact that while farm prices go down as well as up, the cost of the marketing functions only go up. A fairly typical example of this fact is seen in the last quarter of 1975. During that 3-month period, the farm cost of a typical market basket of food declined about 7 percent. However, the total retail price of that market basket of food increased by 1½ percent.

Clearly improved efficiency in the marketing system would be of benefit to the consumer and also the producer. The consumer would realize lower costs or better quality products and producers could expect more equitable returns. Equally important, this could be achieved without depriving the marketing system of its needed financial returns.

The question of marketing alternatives and the potential benefits of change in the current marketing system has also been recognized by scientists in our universities and at the Department of Agriculture. The National Agricultural Public Policy Committee that is chaired by Wally Barr of the Ohio State University recommended the formation of a committee to assess the question of marketing alternatives. About a year ago, an executive committee was formed for the purpose of finding a way to carry out the charge. Subsequently, an ad hoc committee, made up of 26 agricultural economists, under the leadership of Dr. Olan D. Forker, Professor of Agricultural Economics at Cornell University, has proceeded to do an analysis of marketing alternatives.

Their operating premise was a simple question, "Is there a better way?". The ad hoc committee looked at the current situation as reviewed in the first paper in the print and from this point, these agricultural marketing experts looked for and at the options.

I believe they followed a legitimate and laudable approach. The 12 papers they have produced provide insight into many current problems and a virtual feast of food for thought. It should also be noted that their efforts to assess the possible options are balanced with statements of potential costs as well as gains.

In true academic tradition, the authors disclaim any final conclusions and suggest their papers are working papers. However, I think

they are well-thought-out products that can be of value to anyone who is interested in our marketing system and they are imperatives for anyone who wants to assess the possible alternatives that might improve the system. For these reasons, I am happy to have this opportunity to publish the 12 papers as a committee print. As chairman of the Subcommittee on Agricultural Production, Marketing, and Stabilization of Prices, I wish to extend my appreciation to each of the individuals and their supporting institutions or agencies for their contribution in this effort.

Further, I believe that all the materials contained herein are soundly based on theory and empirical evidence. However, the Members of the subcommittee do not necessarily agree with all of the assertions made in this publication, nor do these views necessarily reflect the official position of any of the associated institutions or agencies.

WALTER D. HUDDLESTON,
Chairman, Subcommittee on Agricultural Production, Marketing, and Stabilization of Prices.

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THE SITUATION NOW

(By V. James Rhodes [1] and Olan D. Forker [2])

Is There A Better Way

"There must be a better way to market my products!" Such is the bitter cry of an isolated producer unable to obtain more than a single bid for his crop. It is also the optimistic assertion of a young, competent farm manager who believes his many achievements in improving his productive efficiency can surely be duplicated in his marketing program. Whether the search for better marketing alternatives reflects a do-or-die crisis or rather a simple seeking of improvements, it is common to many producers and others in the marketing system.

The search goes down many avenues. Important—and sometimes impossible—demands are made on the performance of the marketing system. Prices and pricing are frequently at the head of the list. How do I, as a farmer, ensure that I obtain a truly competitive price for my products? When there are only two or three readily accessible handler markets and their offer prices are usually the same, is that a competitive price? Or even if there are many handlers, but they sell to only two or three processors, am I getting a competitive price reflected back to me?

Price fluctuations, always important, have increased in magnitude the past few years. Once there was only a little embarrassment when a neighbor's cattle brought 50 cents more on Wednesday than mine brought the following Monday. Now, when the possible price difference is $2 to $4, one asks is there any equity in such a marketing system? Why do we farmers always have to be price-takers? How can we gain some influence over pricing—as the dairymen have done—and level out these wild price fluctuations? Why should I have to take $4 a bushel less for my soybeans in June than I could have received at the combine last fall?

Are there opportunities for bettering the price-quality relationships in the market place? Researchers say a high-cutability steer is worth 50 percent more than a low-cutability steer. I have the know-how and the production system to produce those more valuable cattle. How can I develop a marketing plan that will pay me more accurately for the quality delivered, whether it is cattle or wheat or fresh vegetables?

I'm basically a corn-soybeans producer on this 600 acre Iowa farm, but I farrow and feed out 100 litters of pigs a year. A few of my neighbors ship their hogs to the terminal market, but that's too costly and inefficient a marketing method to suit me. There are five buying points within a ten mile radius, so I get on the telephone to them when I'm ready to sell hogs. I'm fairly satisfied with the competitive-

[1] Professor, Department of Agricultural Economics, University of Missouri.
[2] Professor, Department of Agricultural Economics, Cornell University.

ness of their bidding. I do get downright disgusted when I sell at $2 or $3 less than if I had sold a week later. Those price fluctuations are too big and unpredictable. I don't think the quality premiums are half what they ought to be; grade and yield selling in the meat makes the most sense to me. If we farmers had some kind of an organization to police grade and yield selling I might give it a try.

I'm a Kansas wheat producer. The farm is paid for, and I figure I can stand the ups and downs of wheat prices and the yearly fluctuations in yields. It does bother me when I see how little of the price of a loaf of bread or a box of breakfast cereal ever gets back to me. Moreover, I'm still a little mad about the Russian Wheat Deal. The hard work is in the production and the money is in the marketing. And then, when the export market makes production attractive consumers complain about high prices, so the President arbitrarily closes the door to exports and prices fall. If farmers would unite together, we ought to be able to change that.

I grow green peas under contract to a local proprietary food processor. The price is set prior to harvest. My only choice is to grow or not to grow. The processor, of course, does take all the market risk of a price change between planting and harvest time. The contract price is not competitively determined because I have no choice and little basis for comparison. There must be a way to bring competitive forces to bear on the contract price determination taking place before planting.

I am an egg producer. My price is determined by a private news reporter who indicates through a price quotation his view of the correct market value on any day. Only one, small-volume, organized exchange functions for the industry. Volume is too low for me to have much confidence in the price information it generates, and I don't feel very comfortable with the omnipotence of the private news reporter. How can we develop more trading volume on the organized exchange so I can feel comfortable about the values determined there?

Milk marketing has come a long way since the chaotic days of the Depression. Milk marketing orders have stabilized prices and helped ensure an adequate supply of milk for fluid uses. But milk selling-prices appear to change slowly and not always in relation to changes in supply or market conditions. Vertical and horizontal integration through organized cooperatives has progressed farther in milk than for any other commodity group. Yet some cooperatives continue to have financial problems, and there are continual problems in the balance of power and control over their operation and the manner in which the costs/benefits of cooperatives are shared among producer-members. Although many point with pride or envy to what has happened in marketing policy toward milk, there must be a better way even here. Other commodity groups have their own unique set of problems and opportunities. Often it is not clear if a change in institutions or institutional arrangements will provide a better way for farmers to market their products.

The Winds of Change

It would be easy to overstate the extent of new agricultural marketing problems. Some are as old as the country itself. Problems of market

access, lack of buyer competition, inadequate market information, and extreme price fluctuation have never been totally absent. Likewise, new marketing institutions have developed from time to time to meet perceived problems. Even as the terminal livestock market, one of our most venerable institutions, fades away it is well to remind ourselves that less than a century ago it was a flourishing new answer to utilizing the new railroad system as a route to Eastern markets. Thus, it is useful to re-examine periodically the particular changing environment of our day which shapes the opportunities for new answers to old problems.

The changing size and specialization of farm units is a most important factor. Larger size eliminates much of the need for the assembling and consolidating of shipments, functions once provided by many small handlers. Larger size and specialization permits more interest and expertise of the producer in marketing. But these factors also increase market risk and sensitivity to large swings in price.

Of likely greater importance is the continued growth of the sophisticated systems agribusinesses use to organize the procurement of farm products. While these systems are at varying stages of development, there is a growing degree of vertical coordination of many products. Many agribusiness firms have the depth of finance and management to coordinate, and sometimes integrate, the flow of products from farm to retail. For some products, such as canning-vegetables, agribusiness handlers and processors have set up such extensive acquisition systems the managerial role of the farmer is sharply curtailed. In the extreme, as in broilers, the independent farmer has access only to a market for his labor, not to a market for broilers.

Larger, more sophisticated and centralized cooperatives are part of today's marketing environment. Cooperatives are central to marketing products such as milk. A few cooperative brand names are now well enough accepted to give them merchandising leverage at retail. On the other hand, some bargaining cooperatives, handle a sufficiently large fraction of a product to negotiate effectively with handlers. There is renewed interest among farmers in cooperatives to use the system as a way to gain market influence and forward integration. Yet many farmers still tend to believe such group action is a fine thing—for other farmers—but maybe not for themselves. Even as cooperatives are accomplishing more, there are renewed questions in government about the role and power of cooperatives. Group efforts by farmers run the risk of encountering very limiting regulations.

There is a new awareness among farmers of a problem that might be called market security. There was a time when one need not ask if there would be a demand tomorrow for a farm product. After all, people have to eat, and there will always be a demand for pork, beef, bread, cream, and butter. But the recent and dramatic decline in per capita consumption of the last two items has shaken that confidence. We live in a merchandising world where items sell because they are sold as much as they are demanded. Accordingly, there is more and more interest in both agribusiness and independent farmers in having control of those merchandising activities which do today's selling and thereby influence tomorrow's demands. Thus there is more farmer interest in forward integration, and "marketing" is concerned with the whole

system—all the way to the consumer—rather than stopping with a satisfactory sale to the first handlers.

Finally, the recent withdrawal of the Federal Government's heavy influence on market prices and supplies of basic commodities has stimulated new interest in industry do-it-yourself programs. Those government programs affected the prices and supplies of livestock and poultry and even of many competing specialty crops, so that their impact was quite widespread. Much of the recent wild price fluctuations, not only in corn and wheat, but also in livestock, poultry, and even in annual fruits and vegetables, can be attributed to the jump in our exports and the elimination of Commodity Credit Corporation grain stockpiles.

A Want List

A complete list of the objectives of farmers, agribusiness firms, and of the general public for agricultural marketing policy alternatives is not possible. Fortunately, neither is it necessary for the task at hand. Rather, a statement of some basic objectives or expectations gives a useful check list as various marketing options are discussed later.

Expectations of farmers.—Numerous values of farmers are reflected in their expectations of a marketing system. A farmer tends to be a maximizer. He wants the best possible price. A farmer—like almost everyone—has strong feelings about equity. These concerns may include objections to certain practices as "unfair"; demands that all sellers in comparable situations be treated equally; resentment that agribusiness gets more than its share of the market decision-making and monetary rewards.

Many farmers emphasize their personal freedom as entrepreneurs. Such farmers may prefer maintenance of many options and a system in which they make all the decisions up to the point of sale. Other farmers are reconciled to making trade-offs which lessen risks or to achieving more personal security by accepting the discipline of an agribusiness contract or the discipline of group effort. The variation among farmers' expectations is affected by their accustomed marketing environment. Farmers who have always sold in open markets are more likely to have expectations geared toward such markets than are farmers who operate in bargaining or vertically integrated environments. Regardless of the type of market system, a farmer generally desires a system that—

1. (*a*) treats him and his fellow-producers equitably, that is, a system of pricing and market access based upon his products' market performance rather than the personal attitudes of the buyer or contractor toward him as an individual;

(*b*) provides adequate prices in view of production costs. While endless controversy can be generated by the conflicting views of what constitutes adequacy, this objective is frequently voiced. Perhaps there would be most agreement on the importance of realizing reasonably predictable prices at the time production decisions are made;

(*c*) reflects to him the quality-price differentials paid by consumers; and

(*d*) rewards his contribution as adequately as it rewards marketing firms for their contributions.

In addition, a farmer selling in what purports to be a competitive, open market generally desires—

2. (*a*) access to conveniently located market outlets;

(*b*) a viable choice among valid competing buyers;

(*c*) the ability to move to market and/or sell any amount that he may choose at any time;

(*d*) sufficient timely and adequate market information so that he may obtain the best available offer at any given time and so rationally time his sales: and

(*e*) sufficient confidence in marketing processes and institutions so that he feels the system is not working against him nor against fellow-producers.

A farmer operating outside the open market (producing for a contractor or selling through a bargaining association) places his reliance upon a set of forces different from those of competing buyers and has a different set of objectives to add to those listed in 1. He generally desires—

3. (*a*) bargaining power equal to or, preferably, exceeding that of the procurement agency with which he, his marketing cooperative or his bargaining associations, deals; and

(*b*) the ability as an individual to obtain equitable treatment vis-á-vis other producers within the contracting or marketing or bargaining process. Where there is group marketing or bargaining, such individual equity may depend much upon the rules of the game enforced within the group.

Various other objectives are entertained of course. Many a farmer in group situations would like to be a free rider who reaps the benefits of group action without any of the disciplines. It may be true that a farmer desires accurate quality-price differentials only when he has a premium product, and that when he pleads for "equity," he really wants better treatment than his neighbors.

Such obviously unrealistic expectations can be readily dismissed. However, less obviously unrealistic expectations may present difficulties. On occasion farmers may have as good a marketing system as is within their political and economic power to achieve, but they may continue to be involved in various abortive attempts to change it because of "too high" expectations.

Expectations of Agribusiness firms.—These expectations vary according to a company's size and complexity. Some firms, such as small family-run elevators, may be operated by individuals who share with many farmers basic concerns about intrepreneurial freedom and equity of treatment. However, much of agribusiness is larger corporations operated by professional management. Their expectations and their efforts exert strong forces upon the types of marketing options open to farmers in various market situations.

While an agribusiness firm is also a maximizer, it may be equally concerned with growth. It aims for an adequate and, frequently, a growing stream of profits and sales. A growing firm will attract better caliber management and will motivate and reward managers more highly.

Security of the firm is given a large premium. Managers do not like large risks. They generally resist large fluctuations in sales and profits, preferring smaller, more stable sales and income streams to larger,

more viable ones. Likewise, a vertically controlled system is frequently more appealing than dependence on the uncontrolled open market. Managers are expected to manage, and they like to minimize environmental factors which are outside their managerial control.

Managers perceive the market channel as a power system. They generally believe they can maximize the security of the firm and increase their market options by actions and arrangements which increase their control through the market channel. Examples are many. Development of strong brands with good consumer acceptance is a prime way for processors to increase their power and security in a market channel. Vertical integration, forward and backward, generally increases a firm's power within a channel. Various contractual measures to insure the continuity and stability of farm products procured may increase a processor's power within the marketing system.

The amount of agricultural products supplied constitutes the size of the current demand for the handling, processing, storage, and transportation services provided by most agribusiness. Fixed facilities and costs are ordinarly quite important, so a big crop is almost always more profitable than a small one. Hence the short-term interests of farmers and agribusiness conflict.

Timely and accurate information about all relevant supply and demand conditions are regarded very highly by agribusiness firms. Their attitudes toward the public versus private provision of that information vary. In many situations large firms could probably increase their own profits and market power by development of a proprietory system available only to themselves. Where a public information system is available, agribusiness firms expect to use it, of course. But agribusiness firms generally have more and better information about demand conditions than is presently available to producers, and they tend to guard such information as a private asset.

While several objectives of agribusiness motivate some form of vertical integration into agricultural production, there are frequently some important deterrents. The amount of risk in agricultural production is one of the most important. While agribusiness involves many firms with very large assets, their capital is still small compared to the possible annual production losses in major products such as grains and livestock. Consequently, firms may be interested in marginal efforts to control supplies, but may be very reluctant to enter into large-scale commitments involving significant increases in risks.

Expectations of the general public.—Consumers expect adequate supplies of food at reasonable prices. While an adequate supply of food in the aggregate at an overall reasonable price level is sufficient for the prevention of hunger for most of the population, what about fluctuations in the supplies and prices of individual foods? Sharply higher prices of major expenditure items such as beef or milk or baked goods is likely to cause considerable dissatisfaction. Presumably similar "shortages" of cranberries or carrots is of relatively less concern.

How to define "reasonable price" is a moot question. One consumer standard for a reasonable price is what it was last year, so sudden and large price increases are very likely to be regarded as unreasonable. Another standard of reasonableness is price in relation to consumer income. A nation accustomed to spending a smaller proportion of its disposable personal income each successive year on food is likely to resist

a reversal of that trend. Yet another standard of reasonableness is related to farm and agribusiness income. Non-agrarians have a considerable reservoir of good will toward farmers—they do not expect to eat cheaply at the expense of reasonable incomes to farmers and farm labor. That expectation is two-edged, of course. Consumers can easily be irritated by evidence that monopoly returns are being earned by those producing and/or marketing their food supply.

Consumers have long shown a taste for variety, for new products, and for convenient labor-saving items; however during the 1974–75 recession, there were drops in sales of numerous specialty and convenience items. Perhaps the message is that consumers want variety and welcome the opportunity to try new items, but they expect value commensurate with cost.

Consumer activists voice numerous specific expectations about individual products and about the general working of the food production-marketing system. On the other hand, the mass of consumers seem little interested in many of these detailed aspects. Perhaps many would agree that the public expects accountability: they want evidence that the food system is providing safe, palatable food in a rational, economical manner.

Implications of these expectations.—A marketing process or institution cannot be all things to all people. Conflicts among the expectations of farmers, agribusiness, and consumers are inevitable. Yet it is difficult to imagine the existence of a food marketing system which does not meet some of the basic aspirations of each group. These proportions need not be equal. Some marketing systems exist that are biased toward the aspirations of farmers and others toward those of agribusiness, depending upon which group has the greater muscle to achieve its ends.

The message to farmers considering new marketing alternatives is clear: First, the proposed alternative must sufficiently meet farmers' aspirations to receive their support. Second, it must meet the aspirations of agribusiness or farmers must have the muscle to withstand the economic and political power of agribusiness to put it over on their own. Third, failure to meet the basic aspirations of the general public may lead to political defeat. That these three conditions are formidable cannot be denied. In fact, in numerous situations around the country, they eliminate serious consideration of the alternatives described in the papers which follow. The task is to find those situations where a new marketing alternative presents real opportunities to farmers.

Ten Marketing Alternatives

Each of the ensuing ten papers discusses one or more specific policy issues that do or could effect substantially the market options open to farmers. There are many contrasts among them. Some involve rather narrow and specific proposals of interest in a few commodities. Other proposals, such as industrial restructuring, are bold, sweeping, even controversial, and have implications for everyone in the economy. Some proposals involve making a competitive, open-market system work better. Others, in effect, abandon the competitive open market, and develop a basis for farmer group action and market power. Most

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of the proposals focus mainly on the domestic market, although one considers the possibilities of more centralized control of foreign trade.

Contrasts aside, the selection criteria give some commonality to the proposals. First, each is believed to be an alternative consistent enough with the stated objectives of farmers to be worth consideration in some part, and occasionally in all, of agriculture. Second, none is presented as the solution for any part and certainly not for all of agriculture. Third, this set of proposals is not designed to be the complete set which ought to be considered. Rather, it is a sampling of marketing alternatives. Time limitations of the authors, cost limitations of the sponsors, and patience limitation of the readers dictate a selection rather than a census. Not all readers, nor even all of the authors, will agree that this selection is necessarily the best one. We hope that after reading the papers you will agree they are a useful, thought-provoking discussion of a set of marketing alternatives relevant to much of present-day agriculture.

Market mechanisms concerned with determining price and maintaining market access for individual farmers are discussed in:

Centralized Remote-Access Markets;
Forward Deliverable Contract Markets; and
Mandatory Public Reporting of Market Transactions.

The next set of market institutions evaluated generally involve group action. Some involve attempts to obtain market access and to influence pricing stability through cooperative marketing or bargaining. The possible uses of marketing orders and boards to coordinate the quantity and quality of production with market opportunities are also examined. The papers are:

Exclusive Agency Bargaining;
Vertical Integration Through Ownership;
Joint Ventures Among Cooperative and Non-Cooperative Marketing Firms;
Marketing Orders; and
Marketing Boards.

The last two papers concern very broad regulatory proposals affecting the working of much of the economy. Industrial restructuring is a sweeping proposal to change by legislation the nature of the competitive game by reducing the size of some of the largest players. Fine tuning includes a set of suggested administrative actions to improve the way the present agricultural marketing system works. The proposals are covered in:

Industrial Restructuring: A Policy for Industrial Competition; and
Fine Tuning the Present System.

CENTRALIZED REMOTE-ACCESS MARKETS

(By Dennis R. Henderson,[1] Lee F. Schrader,[2] and Michael S. Turner[3])

Introduction

Thin markets are characterized by low volume, lack of competition among bidders, inadequate information, unaccessibility to traders, and a high potential for price manipulation. In such markets the validity of prices erodes to the point where they often do not closely reflect true market conditions, that is, prices generated in thin markets frequently are not representative of actual supply/demand pressures, are not accurate measures of product value.

Thin markets result from a movement away from centralized markets to country markets, local auctions, direct buying, and contract production. A major problem occurs when many want to use market prices as the basis for establishing product values but few are using an open market for buying and selling. Centralized, remotely-accessible markets offer an alternative which combines many of the advantages of direct buying and decentralized markets with the pricing accuracy normally associated with large, open markets.

Imagine, if you will, a marketing system with the potential to expose the offering and bid of each seller and each buyer; a market that moves products directly, or nearly so, from seller to buyer; a market that can be entered by both buyers and sellers wherever they are; and one that provides a ready source of instant market news. A tall order? Yes, but clearly within the realm of possibility. These are electronic markets and some, as will be noted, are already in use.

Essential to these markets is the separation of two distinct but often combined marketing functions: negotiating the trade, and physical transfer of the product from seller to buyer. In most markets—grain elevators, livestock auctions, terminal markets—these functions are often performed simultaneously out of tradition, but not necessity.

In order to achieve a high degree of pricing accuracy it is necessary to have a highly competitive market environment with large numbers of buyers and sellers. But the assembly of buyers, sellers, and products at a single exchange point is costly and inefficient. The implications are clear: develop a market system centralizing the process of negotiating trades; allowing products to move directly or nearly so from seller to buyer; and accessible to buyers and sellers wherever they are.

How can this be done? It's not difficult if the products can be described in terms meaningful to both buyers and sellers. This allows trading without personal inspection by the buyer. Description selling is not new, and grades and standards facilitating it exist for most

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agricultural commodities. What is new, or at least relatively so, is the technological capability to centralize description selling in a way that is easily and readily available to all potential traders, regardless of their location. This is where modern electronic communications and computer technology can be directly applied to marketing.

Electronic Trading

While there are many variations electronic markets can take, they all follow the same general model. Sellers describe their products consistent with standard grades. (Third party inspectors are used where grading is complex.) Grading can occur on the farm or at a local assembly point with similar products from different sellers commingled into truckload or carload lots prior to being offered for sale. Commingling may occur at a local assembly point prior to sale or "on paper" for actual assembly after the sale, but prior to delivery.

Offers to sell are disseminated to potential buyers at remote locations through two-way telecommunications. Through the same communications medium buyers bid against each other until acceptable terms or a stalemate is reached. Offers to sell can be negotiated with buyers auction style, with or without a minimum "No Sale" price being established by the seller, or can be offered at firm prices, with buyers selecting among available offers. Conversely, buyers can first present buy orders with sellers subsequently offering products competitively to fill the orders. After a sale is negotiated shipping arrangements are made, either directly to the buyer or through an assembly point.

Variations in this general model include the use of different communications media and methods of negotiating sales, frequency of sales, and geographic and commodity coverage. Telephones and teletype are the major communications alternatives. Sale frequency can range from continuous through daily or weekly to special sales scheduled on an "as needed" basis, depending upon the commodity. For example, slaughter hogs might be traded on a continuous basis, eggs daily, lambs weekly, and feeder calves on a special fall-spring schedule. To date, most electronic markets are limited to single commodities because of the rather unique requirements of each, although multiple commodity systems are conceptually feasible and might develop in time. Single systems could be established to serve local, regional, national, or even continental markets. Clearly, the larger the market the greater the competitiveness, but also the greater the development and operating costs.

Methods for negotiating sales range from relatively simple to complex.

They include:

Manual tradinghouses, where market personnel match telephoned bids and offers.

Telephone auctions, where offers-to-sell are auctioned via a conference telephone connection to potential buyers.

Teletype auctions, where sellers' consignments are listed on a teletype network of potential buyers, then offered at a steadily declining price until a buyer activates the "Buy" key on his teletype.

Computerized tradinghouses, where traders communicate directly with a computer via telephone and/or teletype. The computer

accepts, compiles, and stores bids and offers, and completes transactions by matching bids and offers.

These electronic markets vary dramatically in complexity and capacity. The choice depends upon the conditions in a market: number of traders; volume traded; geographical market coverage; frequency of sales; and resources available for market development.

How and Where Electronic Trading Is Used

Several markets have evolved which facilitate centralized, remote access trading. Commodity futures markets are the best-known examples. In these markets trading is centralized, but buyers and sellers can submit bids and offers from remote locations. Futures trading is a special case, usually concerned with a specific commodity grade, a limited delivery area, distant delivery dates, specified contract size, and speculative trading and therefore is not a satisfactory example of the potential applications of centralized remote-access trading.

Recently, several market systems have been developed similar to those discussed above. These vary in commodity, geographic area, assembly and grading procedures, as well as in methods of operation. They all allow remote access by traders to centralized trading, and result in direct or nearly direct shipping from sellers to buyers. These systems do not cover all possibilities, but do provide insights into how such markets can be organized. Some examples merit a closer look.

Manual tradinghouses.—This is best illustrated by the Egg Clearinghouse, Inc. (ECI) of Durham, New Hampshire. ECI was established primarily by egg producers to fill the need for a competitive price discovery mechanism. It is a manually operated telephone clearinghouse which accepts bids and offers, and matches trades between members anywhere in the 48 contiguous states. Trades are made on gradable nest-run eggs, with quality and weight specified for each lot based upon a test sample. Direct delivery is arranged once the trade is completed. Price information is disseminated based upon ECI trading. Trading on the present basis began in 1971 with volume building slowly. During 1975 an average of 30,000 cases per month was traded.

Telephone auctions.—Probably the most popular of the electronic selling methods used in the United States to date is the telephone auction, or "teleauction". The Virginia Tel-O-Auction, first developed in 1962, is apparently the oldest. Originally established for marketing slaughter hogs and feeder pigs, it has since been used for slaughter cattle, feeder cattle, and market and feeder lambs. The feeder-pig and market-lamb auctions have proved the most popular, with about 400,000 pigs and 90,000 lambs sold in 1975. There are successful feeder-pig teleauctions in at least seven other states, accounting for a total volume exceeding 1 million head per year. Teleauctions are being considered or developed by producers in several areas, with most interest focused on market lambs and feeder cattle.

These markets are very similar. They all utilize conference telephone calls for simultaneous two-way communications between an auctioneer and widely separated bidders. Conference calls are generally limited to a maximum of 15 separate locations, thus some markets require that several buyers meet at a common bidding location while others allow individual connections for each bidder. All sell on the basis of grades or standards. Some assemble and commingle livestock

at local yards prior to the sale, while others inspect the livestock on the farm prior to consignment and physically assemble buyers' lots after the sale. Generally, when livestock is sold on-farm, buyers can choose any delivery date within a specified period following the sale, and sellers often can elect a "No Sale" price.

Use of these markets has been voluntary, and they have become important local market alternatives where they exist. Their significance with respect to the total market, however, has not been great.

Teletype auctions.—Perhaps the most successful of the electronic selling methods to date has been the teletype auction, used extensively and almost exclusively for marketing butcher hogs in Canada. The first market was developed by the Ontario Hog Producers Marketing Board in 1961 and has since been adopted with some modification in Alberta, Manitoba, and the Maritimes. These have been established by producer referendum, and their use is essentially mandatory with limited by-pass possible. About 75 percent of Canada's hogs are sold through these markets.

Teletype auctions are very similar to telephone auctions. The major differences are that each buyer has his own direct teletype connection, thus greatly expanding trading capacity; and that typically, a Dutch or regressive auction is used rather than a progressive or English auction, thus accelerating the selling process. As with the teleauctions, standard grades are used. Some provincial systems assemble hogs prior to sale, while others sell prior to assembly. No application of this system has yet been made in the United States.

Computerized tradinghouses.—This is one of the more innovative of electronic marketing methods and offers almost unlimited trading potential. Computers can handle vast amounts of information very rapidly and facilitate direct trader interaction with conventional teletype terminals, TV-like cathode-ray terminals, and verbal telephone responses through "talking computers." These markets function much like manual tradinghouses, but with significantly greater capacity. Truly national or even continental markets are feasible.

To date one computerized trading system has been developed for agricultural commodities, TELCOT, operated by the Plains Cotton Cooperative Association (PCCA) in Lubbock, Texas. On TELCOT cotton buyers are interconnected to the exchange via cathode-ray terminals. Sellers place their offers and minimum acceptable price on the market by contacting a PCCA operator via a WATS telephone call. The offers are then entered into the TELCOT computer that disseminates them over the network of buyers' terminals. Buyers submit bids to the computer via their terminals, and the computer accepts the highest bid submitted within a specified bidding period—usually 15 or 30 minutes—depending upon the volume of trading. If the highest bid is below the seller's minimum offer price no transaction occurs. If the bid is satisfactory delivery is arranged after the sale with the computer handling the paperwork. Trading and price information is available to all traders. Proposals for similar systems have been developed for eggs, slaughter hogs, and feeder cattle.

The brief descriptions, though understated, are illustrative of actual electronic marketing systems, and provide a basis for evaluating the conditions under which such systems can be successful and the resulting market performance.

The Necessary Elements for Success

Several conditions appear to be important to the success of electronic markets for agricultural commodities. These include characteristics basic to the commodity or industry, plus conditions established by the design and operation of the electronic market itself. Some of the conditions necessary for successful implementation must pre-exist within the system.

Potentially competitive markets.—Electronic marketing appears to be ideally suited to situations where there is an imbalance in market power between buyers and sellers, providing the powerful side accepts the system. But the potential for a competitive bidding process must exist. Such systems offer few advantages in situations where a single seller or buyer dominates.

Trader interest.—Traders must perceive a need for a more competitive market, be willing to trade on a description basis, abide by their commitments to buy or sell, and have confidence in the system. Reduced personal contact with marketing intermediates may render trader interest difficult to maintain.

Accurately describable commodities.—Products to be traded must have characteristics that can be accurately described in terms meaningful to buyers and sellers. Too, commodities traded should be capable of maintaining a relatively stable condition from the time they are described and offered for sale to the time they are delivered to the buyer.

High volume.—Commodities must be produced, bought and sold in relatively large quantities, and traded on a frequent basis in order to provide market liquidity and interest. This suggests that such systems might not be compatible where production and distribution are highly integrated.

In addition, the following conditions should be created within the marketing system in order to achieve successful implementation.

Trader education.—Electronic selling is complex and foreign to most potential traders, thus an educational program is essential to help people better understand the potential benefits associated with electronic markets and the mechanics of trading.

Performance guarantees.—To achieve trader confidence and fiscal integrity it is necessary to assure that traders perform as promised. Contracts between the market agency and traders, bonding, and penalties for misfeasance are ways to accomplish this.

Grading systems.—Development or adoption of meaningful grades and standards and a method for third-party inspection is essential to assure market integrity and clear communication among traders.

Large volume trading.—Not only is the potential for high volume needed, the market must achieve it. Large volume is essential to achieve an accurate price and efficient trading. This may require mandatory trading, as in the Canadian systems, at least on a specified percentage of each buyer's or seller's business.

If the above conditions exist or can be established, an electronic exchange system may be feasible. A market organization would have to be established, a selling method selected that best fits the industry characteristics, and the actual mechanism developed to facilitate trading. But then, it must be asked, is it worth the cost and effort?

Anticipated Results of Electronic Marketing: Gains and Losses

Several potential benefits can accrue to buyers and sellers, to others in the industry, and to the public in general from the use of electronic marketing methods, provided the necessary conditions for successful operation are met. Likewise, there are some potential costs, or limitations. Some of the relevant performance criteria include pricing accuracy, market coordination, marketing efficiency, equity and fairness, and societal gains.

Pricing accuracy is a measure of how well prices reflect the broad spectrum of supply and demand forces at the time of trade. Probably the greatest single advantage of remote access electronic markets is their ability to centralize price negotiations of very large quantities. This creates a price determination process that accurately reflects the actual market conditions at the time of trade. Conceptually, the potential for accurate prices is greater in electronic trading than in any other system. It does not generate stable prices, per se, but it does maintain a system of fluctuating prices which helps assure price changes reflect actual market conditions.

To the extent that electronic trading would help create larger geographical markets, the process of arbitrating prices between various areas in the country is greatly enhanced. Geographical price differences not justified by transportation or quality differences would quickly disappear. Furthermore, centralized trading enhances the collection, dissemination and accuracy of information on prices and other market conditions. Superior information may be one of the most important results. As such, it could replace many existing information services, both public and private.

Market coordination refers to how well resources are allocated among the multitude of industries and firms contributing to a given consumable product, relative to the ultimate demand for that product. The major advantage of electronic markets in this area stems from the improved communications between buyers and sellers about desirable product characteristics that results from the use of product grades and standards. This is not unique to electronic selling, but certainly is enhanced because of the importance of accurate product description in these markets. Product quality should improve, as a result, as prices more accurately reflect quality/value differences. Furthermore, it could enhance coordination among non-users, if any, by providing an improved base for determining transfer prices.

On the negative side, there is nothing inherent in an electronic marketing system that would reduce uncertainty about future market conditions. And, if mandatory, it would preclude the use of non-price coordination practices, such as contracting and vertical integration, that may be used to reduce costs or facilitate merchandising programs. Additionally, an inflexible and unprogressive industry could result if grades and standards become overly rigid.

Marketing efficiency concerns performance of the marketing job at the lowest cost. The potential to reduce marketing costs is great if a large volume covering a wide geographical area is handled. More nearly direct seller-to-buyer movement of the product can be achieved because the sale is negotiated and the ultimate destination determined before it leaves the farm or assembly point of origin, thus transportation, handling, and assembly costs can be minimized.

Collecting market information is less costly because the price negotiation process is centralized. Timing of deliveries can be easily adjusted to more closely fit the buyer's needs, thus increasing his operational efficiency. Remote access reduces the time and costs for buyers and sellers to negotiate trades. Transaction costs may be reduced because selling can be concentrated in a single organization, reducing duplication of facilities and services. Smaller market facilities are needed because physical accommodations for traders aren't necessary and, when on-farm selling is used, shipments can be spread over several days.

Contrariwise, some existing markets would become obsolete. And, if the system was voluntary, it might primarily attract higher quality products, forcing lower quality goods into more costly market channels.

Equity and fairness.—An important feature of remote access markets is the "equalizing" of traders' power—the ease with which traders can enter the system—and the high degree of competitiveness that obtains. Sellers' equity can be improved markedly compared to local markets dominated by one or two buyers. Experience with the Virginia lamb Tel-O-Auction, for example, has demonstrated a 6–10 percent price advantage for sellers primarily because of more competitive bidding.

With on-farm selling products don't have to move to a market to be offered for sale, thus increasing sellers' control over when-to-sell decisions. Small traders are on more even ground vis-a-vis their larger counterparts through actual or on-paper commingling and direct access to other traders. Performance guarantees enhance the integrity of the market, and opportunities for exclusive dealings are reduced—eliminated in mandatory systems. Local monopolistic traders, of course, would lose their economic advantage.

Social consequence is an assessment of the net economic gain or loss to society resulting from a change such as the adoption of a new marketing method. This evaluation suggests a successful electronic market would result in more efficient use of economic resources by lowering the costs of buying, selling, and transportation. Improved coordination means resources would be used for more nearly optimal purposes. And economic power would be more evenly distributed. Theoretically, all segments of society benefit from economic gains in any part of the economy. How such gains would actually be distributed among people is a complex and difficult question to answer, and beyond the scope of this analysis.

Implementation of Electronic Marketing Systems

If the merits of electronic markets are deemed worthy and the conditions for success feasible, how can one be implemented? Most important are commitments by potential traders to use it and by someone to finance its development. Start-up costs are high, and volume trading is essential.

There are two basic alternatives for gaining these commitments—voluntarily and by mandate. Voluntarily, producers and/or buyers can organize, develop a workable model fitting their product characteristics and geographical area, gain contractual commitments from enough traders to assure a reasonable chance of success, then interest a new or existing market agency in providing the service.

There are several alternatives for gaining a mandatory or quasi-mandatory system. Potential users could seek a governmental or institutional grant to finance development and subsidize the initial operation. Legislation could be sought enabling a government agency to develop and operate the system, authorize a marketing board to develop it, and mandate its use if approved by a vote of producers; or market order legislation could be amended to order such a market for at least a specified percentage of all trades.

To date, the most successful electronic markets have been the Canadian hog markets, mandated by law. Conceptually, voluntary markets are feasible. Some are already in use on a limited scale. Realistically, some mandated use may be necessary to achieve sufficient volume for maximum benefits. Given the "public good" nature of the improved information and other benefits that would accrue, mandatory, or at least quasi-mandatory, use and government subsidization may be justified.

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FORWARD DELIVERABLE CONTRACT MARKETS

(By Thomas L. Sporleder[1] and David L. Holder[2])

Introduction

Modern technologies in production, processing, and distribution of food and fiber require coordination of numerous activities within and among firms before potential efficiencies can be realized. As a result, many agricultural and related firms are turning from conventional spot-market transactions to contracts as a means of buying and selling. With quality and quantity already determined, spot-market transactions are based largely on price and are made on a day-to-day basis as a product is available for delivery. Contract transactions, usually initiated by processors, are for longer term commitments, made prior to product delivery, and often before production begins. Contracts may specify volume, acreage, planting or breeding dates, variety of seed or breed of livestock, husbandry practices, quality factors, time and method of harvest, and timing of delivery to the processor. The processor is thus able to minimize processing costs and achieve a high degree of quality control. Contracting is expected to become more widespread in years ahead. It is a potential means to develop better coordination between production and market demands and thus improve efficiency in the food and fiber industry.

Price is often but not always specified or agreed upon at the time of the signing of the contract. It is the problem of price or value determination which is at issue in this paper. Often contracts are negotiated in secret. The farmer sometimes has little information on current, let alone future, market conditions. The free market forces normally at play in the determination of prices or value cannot surface or be expressed. Thus, the process for short run price or value determination for the commodity being contracted is imperfect. This paper describes and evaluates the probable performance of the concept of a forward deliverable contract market, hereafter referred to as FDCM, as one solution to the problem of lack of competition in price determination for forward contracts.

A Definition of FDCM

Comparison with futures markets.—In some respects a FDCM would resemble a futures market. It would be a market for a contract but in the case of the FDCM the contract would be between the person who would deliver the product and the person who would actually plan to receive it. Both types of markets consist of an open market

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exchange where buyers and sellers from all parts of the nation, even the world, trade standardized contracts for future delivery. The contracts specify terms of sale, e.g., quantity and quality specifications, and time and place of delivery, and are traded at a base price with specified premiums and discounts for quality variations from a specified base.

The major difference between a FDCM and futures market would be that the FDCM contract specifies and assumes delivery. Although the futures contract specifies delivery, delivery does not usually occur. A high percentage of deliveries reduces the usefulness of a futures market since it is designed to facilitate forward pricing through hedging and speculation.[3] The futures market is therefore not designed to facilitate delivery. In most cases it is difficult for a processor to procure raw agricultural commodities through the futures market.

The whole purpose for FDCM, on the other hand, is to create a market for contracts that would facilitate delivery by creating a multiplicity of delivery points and offer a variety of standardized contracts for a single commodity in each delivery month to meet varied needs of a large number of processors. FDCM would grant processors the option of specifying time and place of delivery. FDCM would not become a party to each contract as a clearinghouse in futures markets, but would immediately and directly pair the buyer and seller when the contract was executed so that delivery could be made.

Producers and processors would probably enter FDCM directly, without the services of a broker. In futures markets the broker, initial margin, and variation margin are used to enforce contracts; in FDCM certified financial strength and integrity of producer and processor, as well as various penalties for noncompliance, would be used to enforce the contract. Certification, as well as a variety of allowable contract conditions, delivery points, and pairing of individual buyers and sellers at the beginning of a contract would make FDCM unattractive to speculators who would probably continue to be attracted to futures markets.

Production and marketing contracts.—FDCM could be designed to handle either production or marketing contracts. Production contracts—made for a specified period before production begins—would emphasize quality, specific cultural practices, marketing and delivery procedures. Marketing contracts—traded after production begins—would be limited mainly to specification of quality, quantity, and timing of deliveries. Price would be determined through participation in FDCM.

Pricing and transactions.—There are four alternatives for trading and thus determining the price of FDCM contracts: a computerized matching of producer offers and processor bids; a telephone exchange; a teletype auction; and a "trading pit", as used in most futures markets. Given the technology already available, a centralized exchange, manual or computerized, has the greatest potential for improving pricing

[3] Holbrook Working, "Futures Trading and Hedging," American Economic Review, June 1953, p. 315. T. A. Hieronymus, "The Desirability of a Cattle Futures Market," unpublished paper, n.d.

and operational efficiency. Modern technology in telecommunications and computers makes it technologically possible to have one centralized market for the entire United States, or even the world.

Access to the computer could be gained by touch-tone telephone units located in the offices of most traders. (Teletype or television-like equipment could also be used by high-volume traders.) A producer could call the market computer, receive an up-to-the-second market report, and enter information about the commodity he wished to sell, including his offering price. The computer would process the offer by searching for a similar or higher bid from a processor.

If a satisfactory buyer's price was found, the sale would be confirmed and both parties notified at once. If no bids were available at the desired price, the producer's offer would be placed on file to await a higher entry by a processor. If no higher bids were made within a desired period of time, the producer would have to adjust his price downward in order to make a transaction. Both buyers and sellers would adjust bids and offers until an acceptable match was found.

The FDCM would keep accurate records, prepare all necessary paperwork for sale confirmation, title transfer, and transfer of funds. Manpower requirements of a computerized FDCM would be relatively low but equipment costs relatively high. A large volume of trades would be necessary to keep down per-unit transaction costs. A small volume FDCM could use a manual matching process.

Since FDCM would operate over a broad geographic area, provision could be made to automatically adjust all bids and offers for a transportation differential from origin to destination. Such an automatic adjustment would expand significantly the potential trading area of buyers and sellers. However, FDCM would not be expected to dramatically change the physical movement pattern of most commodities. Most production would still tend to go to processors in the immediate area of production to minimize transportation costs.

The Applicability of FDCM

Contracts, as used by processors and producers, are used to specify quality to improve quality control; to specify and improve scheduling of activities in production, processing, and distribution; and to reduce price risk or transfer price risk from one party to another. A FDCM would be a means to formalize the process of contract negotiation and broaden the range of competition over the terms of the contract and the price. It would be applicable to any subsector now using contracts, such as vegetables or fruits for processing or sugar beets (Table 1). Even though extensive contracting does not currently occur in hogs, cattle, sheep, eggs, or turkeys, a FDCM might offer an opportunity to improve coordination for these commodities. FDCM appears much less applicable to commodities such as food and feed grains where the product is not perishable and the market channel from producer to processor includes several types of firms that handle the product.

TABLE 1.—ESTIMATED PERCENTAGE OF OUTPUT PRODUCED UNDER PRODUCTION CONTRACTS AND UNDER VERTICAL INTEGRATION, UNITED STATES, 1960 AND 1970

[In percent]

Crop	Production contracts		Vertical integration	
	1960	1970	1960	1970
Feed grains	0.1	0.1	0.4	0.5
Hay and forage	.3	.3		
Food grains	1.0	2.0	.3	.5
Vegetables for fresh market	20.0	21.0	25.0	30.0
Vegetables for processing	67.0	85.0	8.0	10.0
Dry beans and peas	35.0	1.0	1.0	1.0
Potatoes	40.0	45.0	30.0	25.0
Citrus fruits	60.0	55.0	20.0	30.0
Other fruits and nuts	20.0	20.0	15.0	20.0
Sugar beets	93.0	98.0	2.0	2.0
Sugarcane	40.0	40.0	60.0	60.0
Other sugar crops	5.0	5.0	2.0	2.0
Cotton	5.0	11.0	3.0	1.0
Tobacco	2.0	2.0	2.0	2.0
Oil-bearing crops	1.0	1.0	.4	.5
Seed crops	80.0	80.0	.3	.5
Miscellaneous crops	5.0	5.0	1.0	1.0
Total crops [1]	8.6	9.5	4.3	4.8
Feed cattle	10.0	18.0	3.0	4.0
Sheep and lambs	2.0	7.0	2.0	3.0
Hogs	.7	1.0	.7	1.0
Fluid-grade milk	95.0	95.0	3.0	3.0
Manufacturing-grade milk	25.0	25.0	2.0	1.0
Eggs	5.0	20.0	10.0	20.0
Broilers	98.0	90.0	5.0	7.0
Turkeys	30.0	42.0	4.0	12.0
Miscellaneous	3.0	3.0	1.0	1.0
Total livestock items [1]	27.2	31.4	3.2	4.8
Total all items [2]	15.1	17.2	3.9	4.8

[1] The estimates for individual items are based on the informed judgments of a number of production and marketing specialists in the U.S. Department of Agriculture. The totals were obtained by weighting the individual items by the relative weights used in computing the ERS index of total farm output.

[2] Final totals for production contracts and vertical integration were obtained by combining the total estimates for crops and livestock after adjusting for double counting of farm-produced feed crops consumed by livestock. As in the ERS index of total farm output, crops represent about ⅔ of the final weight and livestock ⅓.

Source: R. L. Minghell and W. S. Hoofnegle, "Contract Production and Vertical Integration in Farming, 1960 and 1970," ERS-479, USDA-ERS, April 1972.

Without a contract commitment with price specified before planting, the producer bears the risk of price changes during the production period; contracting with price specified shifts the risk but does not eliminate it. Of course, if the futures market has a futures contract on the commodity involved, a buyer or seller can offset a commitment in the FDCM market.

Futures markets, currently functioning for many commodities, (Table 2), generally are active if there is an "active" spot market for a commodity. Active spot markets and futures markets are identified by a high ratio of units traded per unit of production. If contracting and a FDCM would become common, spot-market and future-market activities would possibly decline.

Some Examples

A discussion of the economic consequences and potential applicability of the introduction of a FDCM where other producer-first handler exchange arrangements now exist will be used to illustrate the FDCM concept. Three commodities (tomatoes for processing, hogs,

and wheat) are chosen because they represent a broad array of commodity and trading characteristics.

Tomatoes for Processing are seasonal, perishable, cannot be economically transported great distances from the production area, and have no active spot or futures markets. Contracts are now signed prior to production between processor and producer in private negotiation or through producer bargaining associations.

FDCM would not represent a substantial departure from established exchange arrangements but would create an open market for contracts. Because of the commodity's perishability, a computerized system for trading production contracts most likely would be established in each major production area. Processors desiring to contract would choose one of several standardized contracts best suiting their needs and enter an offer to contract over the exchange. Price could be determined either by bid/offer or auction. All offers and actual transactions would be immediately and simultaneously available to both processors and producers.

TABLE 2.—LEVEL OF ACTIVITY IN FUTURES MARKETS AND SPOT MARKETS, SELECTED PRODUCTS

	Active futures	Little or no activity in futures
Active spot	Grains Wheat, corn, soybeans, oats, barley,[1] rye,[1] rapeseed,[1] flaxseed.[1] Processed products: Soybean oil, soybean meal, pork bellies, boneless beef, orange juice, iced broilers, coffee, cocoa, sugar. Livestock: cattle, hogs. Other: Cotton, potatoes.	Fresh fruits: Apples, peaches, pears, grapes, oranges, watermelon, plums, apricots, grapefruit. Fresh vegetables: Lettuce, carrots, cucumbers, peppers, onions, celery, sweet corn. Other: Nuts, fish, sheep, wool.[2]
Little or no activity in spot.		Fruits for processing: Cherries, peaches, pears, tomatoes. Vegetables for processing: Peas, snapbeans, sweet corn. Other: Broilers (live), sugarcane, sugar beets, milk, eggs,[2] seed crops.

[1] Vancouver.
[2] Only commodities in "little or no activity" in futures with futures markets actually operating.

Slaughter Hogs are produced throughout the country and marketed continuously throughout the year on a spot basis when hogs are ready for slaughter. Many Hogs move directly from producer to packer, a method of marketing that is increasing as production units become large enough to ship in truckload lots. The majority of hogs still moves to packers via dealers, agents, and public markets. Contracts are currently used for only about one percent of all hogs sold.

If a FDCM were in existence, production or marketing contracting might expand. In an FDCM contract quality specifications could be in terms of measurable carcass features such as weight, length, and backfat thickness. Prices of contracts could be negotiated in terms of a base carcass of specified weight, length, and backfat. Enough different contract specifications could be used to permit trading on the market to determine the value of the major product characteristics. Carcasses that varied from the base within each contract category could be priced according to a pre-established premium-discount schedule. The premium-discount schedule would have to be revised occasionally as comparative values changed. To satisfy the demands of a large number of packers having different carcass specifications, two or three

standardized contracts with different bases could be offered for barrows and gilts and an additional contract for slaughter sows.

Carcass trading would improve pricing efficiency by paying for hogs according to the value of each carcass sold, would serve as a direct incentive for producers to produce what the market demands, and would facilitate direct movement from producer to packer by eliminating live weighing.

A single FDCM for slaughter hogs could handle all transactions within the United States. The results of such widespread use would be more competitive and accurate pricing, and price certainty for producers beginning when the contract is entered. Improved scheduling of hogs from farm to plant would reduce daily, seasonal, and cyclical gluts and scarcities and their effects on marketing and processing efficiency.

Wheat is marketed worldwide. The commodity is produced seasonally, is storable, and can be economically transported long distances from production areas. There are domestic and world spot markets as well as active futures markets. Producers rarely place their crop under production or marketing contracts. Unlike the marketing channel for either tomatoes for processing or slaughter hogs, the channel for wheat includes numerous businesses between producer and miller. These businesses engage in storing, risk-bearing, assembling large quantities, and transporting wheat to export markets or domestic millers. In this process, ownership may pass through agents, brokers, cooperatives, or large grain-handling firms.

Use of FDCM for wheat would be a radical departure from the current spot market arrangement, and exclusive use of FDCM is not likely because of the complex nature of the distribution system for the commodity. In food and feed grains, three or four pricing points exist prior to the processor or export market, while for most fruits and vegetables for processing only one pricing point exists between producer and processor. For wheat, pricing points exist at the local elevator, terminal elevator, and miller or export level. Because of this, positioning of the FDCM most likely would be just prior to the miller or export level, rather than the producer-first handler level. FDCM for wheat probably would not be addressed directly by a producer but rather by his cooperative, terminal elevator, or a large grain-handling firm.

Even if FDCM were operable at this level for feed or food grain, only modest operational or technical efficiency could be expected compared with the current, primarily spot market, transaction system. At best, FDCM for wheat would have only little net benefit for producers.

Expected Economic Consequences of FDCM

Operational and pricing efficiency.—Efficiency in marketing is of two types: operational efficiency, which refers to how efficiently various physical activities—processing, storing, transporting, grading, and packing—are conducted; and pricing efficiency, which refers to the accuracy and speed with which prices are reflected to and among participants in a marketing channel. For example, if accurate information concerning supply and demand conditions is not readily and equally available to all participants in a marketing channel, then price may not be accurate. Or, if mechanisms do not exist to readily

reflect new market conditions, price may be accurate but not available in time to have an appropriate influence on production or marketing decisions. Either of these cases could result in "inefficient" pricing.

A FDCM for production or marketing contracts could improve operational efficiency by enabling better coordination in production and processing activities. It could also and more importantly improve pricing efficiency by expanding or increasing the exposure of potential producers (sellers) and processors (buyers) to each other.

For the processor who relies on contractual arrangements rather than spot-market purchases for raw-product procurement, some increase in production efficiency would be expected as more control over quality, quantity, and timing of deliveries could be gained. As a result, more efficient use of plant, equipment, and labor would be realized. Processors may gain some efficiency in merchandising their output because they could assure more uniform quality input. All these effects would be expected to lower long-run average cost for processors through the ability to better coordinate and allocate resources necessary to produce a given output.

In comparison with spot markets FDCM could provide several improvements in exchange efficiency. FDCM could be a high-volume exchange system that would centralize transactions over a broad geographic area. Physical handling within the FDCM system would be separated from transaction activity and in many cases handling could be reduced as more direct shipments from producer to processor would be encouraged. Commodities that still required handling and assembly prior to delivery could be scheduled to meet buyer needs. Scheduling deliveries could be arranged to minimize assembly time, labor, shrink, and need for facilities.

FDCM could conduct all transactions electronically and all trading would be on a description basis. The need for each potential buyer to travel to low-volume sales markets or to individual sellers and visually inspect the commodity would be eliminated. Travel expenses and the number of buyers employed by each processor could thus be reduced. FDCM could also reduce the need for brokers, merchants, and other handlers often used to bring buyers and sellers together.

Procurement decisions made several months in advance of delivery would require the processor to do some advanced planning which does have a cost. The processor would also face new uncertainty in forecasting and meeting future needs. However, processors should be in a better position than producers to make these decisions because of superior market intelligence of product markets.

Both producer and processor could save by completing transactions quickly and at low cost in a computerized trading system. The actual operating costs of a FDCM could be less than exchange costs of spot transactions. For example, Holder estimated the cost of pairing buyers and sellers at about $1.10 per head in terminal market transactions for hogs.[4] For auction markets, costs are estimated between 65 to 80 cents per head, while transactions in local dealer markets cost about 35 to 55 cents per head. In contrast, a computerized forward contract market, similar to FDCM, was estimated to have an exchange cost of

[4] David L. Holder, "A Computerized Forward Contract Market for Slaughter Hogs," Agr. Econ. Rpt. No. 211, Dept. of Agricultural Economics, Michigan State Univ., Jan. 1972, pp. 51–54.

40–45 cents per head on an annual volume of 5 million head, 20–25 cents on 25 million head, and 15–20 cents on 50 million head.

Whether or not coordination of supply and demand at the producer-first handler level would be substantially improved depends on several circumstances. If the FDCM was not an exclusive market and traded only marketing contracts then little improvement would be anticipated. If the FDCM was an exclusive producer-first handler exchange mechanism and all contracts were made prior to production, then supply and demand would be significantly more coordinated than under spot market conditions. The improved coordination could significantly reduce processing costs. In addition, the operating efficiency of FDCM would put downward pressure on marketing costs.

FDCM would significantly increase the amount of information on market conditions compared with dispersed spot markets or private treatey contract negotiations. Comparison of prices over quality, quantity, location, and time would be facilitated. Market reports generated from a FDCM would be more timely and accurate because they would be more up-to-date and more broadly based and because price quotations would be for specified quality and terms of trade.

Price could more effectively communicate supply and demand conditions through FDCM. Allocation of available supplies of each quality among various demands by processors could be more systematic. Also, because the FDCM would generate an array of prices—one for each future delivery time—producers would have more information regarding the most profitable delivery time. The broader geographic area over which FDCM would operate should mean that price differences among geographic areas more nearly reflect the differences due to transportation cost only.

Competition, market power, and market access.—The presence of many sellers (producers) and few buyers (processors) in most local spot markets enhances the opportunity for buyers to exert downward pressure on prices paid for a commodity. In contrast, FDCM would expose each producer's offer to many buyers, thereby increasing competition among buyers and decreasing their aggregate market power. Thus, in FDCM, producers should gain market power relative to processors simply by increased competition. For commodities that currently have solely a spot market at the producer-first handler level, FDCM would represent an additional market or alternative.

Market access is the ease with which buyers or sellers can participate in a market and the availability of alternative markets in which to participate. Producers and processors would both have an initial difficulty in entering FDCM because the reliability of the seller and the credit worthiness of the buyer would have to be established prior to participation. Once a new participant's status was verified, however, access would be easy.

Allocation of risk.—Both producers and processors are likely to consider the new risks assumed under contracting to be greater than the risks avoided. Producers would have less price risk by contracting through FDCM than selling on spot markets because FDCM would allow price to be known and assured prior to a production decision. However, quality, quantity, and timing risks would arise because nonprice terms of the contract would have to be met. One strategy of pro-

ducers might be to produce more product than demanded by the contract.

Processors are relieved of quality, quantity, and timing risks, but assume price risk. Processors might use a number of methods to eliminate or reduce price risk. First, processors could hedge in futures markets for the input purchased on contract through FDCM and transfer price risk to professional speculators. Second, processors could hedge in futures markets for finished products they are producing. Other product futures markets could be developed as needed by the trade. Third, with assurance of input supply through FDCM, processors would have an opportunity to make forward contracts with wholesalers and retailers. Fourth, an options market, similar to the options market for corporate securities, could be developed to parallel FDCM. A processor buying a contract in FDCM could offset his price risk by buying an option to offset the contract. The option might have to be in the product market as options in raw products would require a parallel spot market to permit option writers to honor their contracts. Fifth, price insurance is another possibility, but again it might have to be on the finished products if raw product prices do not exist. An "insurer," in this case largely a speculator, would guarantee the processor a minimum selling price. The insurance premium would reflect the probability of a price decline and resulting claim against the insurance underwriter.

External effects.—Spot markets might decline as contract markets such as FDCM increase in use. Spot markets would become a "residual quantity market" if a major portion of the total production of a commodity was contracted. This could result in wide price swings in the spot market because price would depend on the supply of and demand for the residual noncontracted production, potentially highly volatile over time. Also, the per-unit costs of using spot markets could increase as the volume of transactions declined.

The impetus for ownership through vertical integration by processors into production may be reduced by having FDCM as an alternative to the spot market. Contracting, as already described, allows processors to closely coordinate delivery of quantities of specific qualities with processing plant needs. If existing spot markets now lead to backward ownership integration, this movement could be met and overcome through contracting.

Effects on consumers.—Consumers could ultimately benefit from a shift in transactions from spot market to FDCM. The absolute amount of benefit would depend upon per-unit cost savings by FDCM, the extent of FDCM use within a particular marketing channel, and the extent of market competition at all other levels within the marketing channel. If a competitive environment exists throughout the marketing channel for a commodity, then consumers would benefit from lower transfer and processing costs that accrue through use of FDCM at the producer-first handler level. Lower costs at this level would lower retail prices by some lesser amount.

Consumers could benefit from increased pricing efficiency realized through quality premiums and discounts used in contracts because they would more accurately signal price differentials for qualities most demanded by consumers. Relative to the spot market, FDCM

could more directly reflect consumers' quality desires to processors and producers.

FDCM could enable buyers and sellers to price commodities before production rather than at the time of delivery to a spot market. When prices are determined after production, they are partially a residual of quantity produced rather than a cause of the quantity produced. If, through FDCM, production cycles could be dampened, prices at all levels within the marketing channel would be more stable.

Implementation

FDCM could be established by existing commodity exchanges as a new formalized forward-selling technique that would parallel and possibly replace traditional raw product futures markets. The exchanges have the advantage of experience in establishing and operating contract markets, but they also have a strong vested interest in futures markets whose clientele and day-to-day operating procedures differ from the proposed FDCM.

Producers could take the initiative by organizing a cooperative to establish and operate FDCM. The cooperative approach would give producers an opportunity to make input into specification of contracts and operating procedures.

The federal government could also institute FDCM. If the benefits are significant for improving the efficiency, and perhaps the equity, of our food and fiber production and marketing system, Congress could pass the necessary enabling legislation, and FDCM could be instituted by a new government corporation similar to the Commodity Credit Corporation (CCC) or by a federal market order.

Financing would be needed to develop, promote, and operate FDCM. Developmental and promotional funds could come from corporate stockholders, cooperative members, or the federal treasury, depending on the form of organization that would arise to implement FDCM. Private organizations could also borrow funds or possibly sell bonds. Operating monies could come from fees charged FDCM users, regardless of organization form.

Regulation.—FDCM would come under the purview of the Commodity Futures Trading Commission, the Securities and Exchange Commission, the U.S. Department of Agriculture, and state departments of agriculture. Compliance with all applicable regulations would be necessary regardless of which organization or group might implementFDCM.

Conclusions

FDCM represents more than shifting transactions from spot to a contract basis. FDCM implies an organized, computerized exchange mechanism for trading forward deliverable contracts. The potential economic impact of FDCM on efficiency, competition and market power, access to markets, and risk varies substantially from commodity to commodity. Potential operational efficiency increases are greater for a forward-contract market trading exclusively in production rather than marketing contracts. Exclusive production contracting could be most easily adopted for many fruits and vegetables for processing and least easily adopted for food and feed grains.

For commodities now primarily under contract at the producer-first handler level, the most significant economic impact on marketing would be realized from additional and more accurate market information inevitably generated by FDCM. For commodities now traded primarily in spot markets, the most significant economic impact would occur from the shift to contracting. While some generalizations can be made, the net benefit for producers and consumers from an institution such as FDCM depends on the circumstances surrounding the market for each commodity.

MANDATORY PUBLIC REPORTING OF MARKET TRANSACTIONS

(By Kirby Moulton [1] and Daniel I. Padberg [2])

Introduction

The performance of our competitive food system is of vital importance to all Americans. Why their concern?

Consumers, because prices are higher than necessary and product choices restricted;

Farmers, because marketing alternatives are limited and economic returns variable;

Businessmen, because profit opportunities are obsecured and planning processes frustrated; and

Public policy makers, because monitoring is difficult and policy need unrecognized.

These concerns become more clearly recognized as our economic system changes. In the past, many sectors of our economy—and particularly the agricultural sector—were comprised of numerous independent firms and organizations. Market participants could not individually influence total market results. These disaggregated (or dispersed) markets were not necessarily efficient or competitive. Instances of local monopolies and discriminatory pricing were—and are—all too evident; however wherever a free flow of market information existed, the opportunities for discrimination were reduced. Information was the lubricant for efficient market coordination.

In time our system changed. Technological advances led to larger firms, vertical integration occurred, and economic concentration resulted. Many traditional activities of the marketplace were internalized by large firms. Individual market participants could now influence final market results as "conscious cooperation" became the mechanism of economic coordination. Significant amounts of market information formerly provided through open market transactions became hidden and lost in private contract negotiations and internal accounting records.

This change process has resulted in a mixed system containing a spectrum of markets ranging from concentrated to disaggregated. It has also resulted in a highly variable market-information system. In some markets the quality of publicly reported information is adequate for production and marketing decisions, but in others reported transaction information is far too skimpy or unreliable to be useful in main-

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taining competitive conditions. Consequently, economic and public policy decisions are made with less information of variable quality.

As the availability and quality of information declines, the marketing system works less well. Private trading is more uncertain in relating supplies and demands. As risk and uncertainty increase, they add to marketing costs. Consumers pay more, and farmers get less as a result. In addition, questions of "accountability" arise. Without adequate information our basic competition is less effective.

What can be done to improve this system? That is the focus of this paper. Specifically, we examine a proposed mandatory market reporting system and its potential for providing a fuller range of market information needed for public and private decision-making. Implicit in our approach is the belief that market information programs are part of our national policy toward competition. They provide information needed by farmers, processors, distributors, and consumers to facilitate competitive performance; and they provide essential information if society is to continually appraise and correct our market economy. Without information, the market alternatives facing farmers, as well as all others in our competitive system, are dim and uncertain.

A Mandatory Market Reporting System

The maintenance of a competitive private market economy is a key objective of our national economic policy. Assuring the availability of information needed for such a market is the function of a market reporting system. If a voluntary reporting system is unable to generate needed information, then a mandatory system may be necessary.

The test for determining what information ought to be provided is a difficult one. Some concept of net public benefit is needed—a concept compatible with a private market economy. The mandatory reporting system we describe is considered in the context of this constraint.

The reporting system discussed here is an extension of the present Federal-State Market News Service. It is mandatory because the present voluntary system does not produce adequate information for competitive market behavior. Some important markets are not reported at all, and others are reported incompletely, and possibly inaccurately.

In determining the design of a market information system, more detail is needed concerning decision-making requirements. It will do American farmers little good if the information provided is suitable only for economic researchers. We are concerned with two important classes of decisions:

Those related to product marketing, such as when and where to sell and buy; and

Those related to planning and investment activities, such as crop enterprise planning and facility acquisition.

Deficiencies in the present system.—Our current government-operated information system for agricultural markets had its beginning over fifty years ago. Its objective was and is to provide market information needed for better operation of agricultural markets. From a modest start, the Federal-State Market News Service expanded to cover important markets for our principal commodities. Reports of

prices, volumes, and general market conditions are based on observed transactions in auction markets and voluntary reports in other markets. Information is gathered by reporters, usually using telephone contacts.

The market information provided has resulted in better decisions in many markets but still falls short of what is needed. Numerous transactions are not reported. Many small markets are not covered even though they are important to local producers. For example, flower growers in California, with multimillion dollar annual shipments, lack information at the first-handler level. Potato growers lack information about the processed potato market which heavily influences the demand for raw potatoes.

In some cases market information is lacking because major buyers refuse to report transactions as in the Midwest where some major meat packers with highly decentralized cattle-buying operations will not report prices and volumes. As a result, producers must sell in relative ignorance of what "true" market is. In another case a major packer of bacon in Wisconsin will not cooperate in providing market data to market reporters. The finger of fault should not be directed only toward processors and middlemen: some farmers also fail to cooperate in providing information for crop surveys and market reports. These information gaps provide serious impediments to efficient marketing.

Because the present system is voluntary, cooperators can be more selective about the information provided. Those reporting transactions may report prices favorable to themselves, or fail to report quantities, or aggregate over several grade standards to obscure price spreads. The net result is inadequate information for buying and selling decisions.

Structural changes have decreased the flow of market information. While public markets yielded information which could be reported, newly evolved private markets, using contracts and individual negotiation, create no public signals. An example is the transition of fresh produce distribution from organized wholesale markets to a system of field buying by major food distributors. The wholesale market created information which was carefully measured in terms of price and quantity and in some cases quality, creating an important stream of market information. The field buying operations involve most of the same physical functions and handling processes, but the public information is not generated. Without mandatory reporting programs, market news agencies find it very difficult to identify the terms of trade, quantities, or qualities moving in this "closed" market system.

Contracts are an important integrating device in our new market systems. Many markets utilize both cash and contract transactions. Cash transactions may be reported, but contract transactions generally are not. More and more, seasonal and multiseasonal "supply" contracts are being used in agricultural markets. Supply contracts, by definition, do not fix price but generally specify the means for its determination. In some cases the settlement price may be tied to an outsider price as in sugar beets where prices are based on average refined sugar prices. In other cases the contract price is tied to the average market price reported in the market at time of delivery.

The dilemma in this situation is evident. Farmers may deliver a crop with no assurance of price determination until a later date. Even

if a market price is known it may be the result of a few transactions in the cash market rather than many transactions in the contract market.

In the case where farmers contract individually with processors or other buyers, they may do so with no knowledge of what terms are being offered to other farmers in the same or neighboring markets. Without this knowledge—information of this nature is not generally reported—the farmer is at an economic disadvantage to the buyer.

Additional problems develop when contract prices are tied to cash market prices. If the source of market information is primarily processors, growers fear the ability of processors to manipulate reported cash prices by selectively reporting transactions. In other instances, processors are worried about the ability of competitors to manipulate raw product prices upward by purchasing small quantities at high prices in order to establish a reported price.

In some cases transactions are relatively straightforward and reporting not difficult; but closed transactions can be much more complex as buyers and sellers often agree to payment systems which essentially share the risks between them. These arrangements may have the buyer making a partial payment at the time of product delivery and, depending on eventual pack-out and sales price, an additional payment later. In these much more complex closed transactions, mandatory reporting may be very difficult and yield less useful information.

These problems can be reduced in a mandatory reporting system by requiring that processors report volume represented by price quoted, by obtaining more information from producers in addition to processors, and by confirming prices through a second source.

Decisions relating to investment and public policy require the most comprehensive sets of information. Investment decisions require information permitting estimation of the profitability of alternative investments. Public policy decisions require information about profits earned through various economic activities in order to gauge system efficiency relative to accepted norms.

Business line reporting and transfer price reporting could provide much information needed for investment decisions. With such information farmers, for example, could make a more intelligent decision about investing in processing plants or shipping facilities. In similar fashion, other firms outside the industry could evaluate the opportunity of entering the industry. In both cases, barriers to entry resulting from informational gaps would be reduced.

Business line reporting may emerge as the result of other competition policy decisions, but is unlikely to be initiated solely for the purposes discussed in this paper. Such information gaps will continue to obscure the existence of market opportunities and reduce our ability to evaluate market performance.

Information concerning product end use is also needed to facilitate investment and marketing decisions. For example, farmers considering investment in hop production should know about the sale of beers using hops relative to the sale of beers not using hops. A farmer should know if observed beer shipment increases imply a correspondingly expanded market requirement for hops. In a similar vein, information on the movement of granola cereals utilizing almonds is of special interest to potential almond growers.

A mandatory reporting system could improve the availability of end use information. For example, information concerning the volume of tomatoes processed into paste, whole products, and juice facilitates estimation of the marginal value of raw tomatoes, hence an equitable farm price. The proposed system could improve the classification of product movement to include relevant price lines and product specifications which influence raw product requirements.

Hierarchy of information needs.—A great deal of additional information is needed to remedy the deficiencies of our present market-reporting system. We see a hierarchy of information needs which must be satisfied if our information flow is to approach that of an open market economy. Needed are:

1. Adequate reports covering price, volume, and relevant product specifications in cash and contract agricultural market transactions;
2. Reports of market transactions at the next higher and next lower level in the distribution chain;
3. Detailed end use data suitable for evaluating raw product use trends;
4. Reports of relevant transfer prices and transactions in vertically integrated market organizations; and
5. Line of business reporting by conglomerate firms.

This hierarchy of information needs represents a series of objectives which our information programs should be directed toward if they are to be an effective part of our competition policy. A mandatory reporting system is not likely to achieve all these objectives without other policy changes; however as lower level information needs are satisfied, the requirements for transfer price and line of business reporting should be carefully assessed.

Voluntary versus mandatory reporting.—Large amounts of information are required in the system we have described. Whether or not our existing report procedures are appropriate for the additional information volume is open to question. Particularly at issue is the voluntary character of our current system.

Voluntary reporting forms the basis for our current agricultural market reports and for most other public reports of economic transactions. The motivation for cooperation varies. Many of those who provide information assume the costs of doing so are at least offset by the value of aggregate market information returned to them. Presumably, others provide information in belief that voluntary cooperation is less onerous and will forestall a mandatory reporting system. For example, the state of Wisconsin requests processors to submit contracts to the state for review and summary purposes. Compliance with this request is not required by statute, however the state has authority to obtain contracts and related material in cases of contract dispute. Industry members apparently believe that acceding to the request is preferable to the potential demand for contracts in the event of disputes. Compliance is close to one hundred percent.

Reporting of contracts and internal prices presents some problems which may not be overcome by a voluntary reporting system. One problem is the natural reluctance of firms to divulge internal information. While the Wisconsin experience suggests contract information can be obtained through a semi-voluntary system, we are skeptical that transfer prices or line of business data can be obtained in that

manner. The second problem arises from difficulties in sampling the complex transaction in private markets. Because such transactions are characterized by a wide variety of product specifications, delivery terms, and payment schedules, careful sampling is needed to produce reliable market reports. Voluntary reporting is not likely to produce the sample dimensions needed for reliable estimation of market activity.

Two approaches are apparent for obtaining market information. One is to require that all specified transactions be reported; the second is to require that information be supplied whenever requested. A mandatory reporting of all transactions would be extremely burdensome. The reporting system would have difficulty in collecting data, interpreting it, and communicating the resulting information. Enforcing compliance would necessitate a large staff. We believe the expense of this approach would exceed its benefits by a considerable margin. The second approach makes more sense. Refusal to give full transaction information when requested would be considered an unfair trade practice, thus the basis for enforcement already exists under current trade practice policies. Unnecessary reporting would be reduced, and the inflow of data maintained within organizational capabilities. This approach would require determination of valid sampling programs to assure credible market reports.

How and Where Mandatory Reporting Is Applied

We have little experience to draw on in evaluating a mandatory reporting system. If such systems are operating in foreign markets, we are unaware of them.

Some efforts in the direction of mandatory reporting have been made within the United States. We have described previously the contract reporting program established in Wisconsin. The summarized contract data is published periodically, but too late to influence planting or current year contracting decisions. The reports do provide a base line comparison for use in subsequent contracting decisions.

North Carolina statutes require processor contracts to contain clauses stipulating delivery conditions, methods of payment, dispute procedures, and other terms considered basic to good contracting procedures. Compliance is obtained by requiring fruit and vegetable processors to submit contracts to the state for approval prior to making offers to growers; however the state does not collect data on prices at which the contracts are ultimately negotiated.

New York requires vintners to announce a price for their supply contracts on or before September 15. The objective of this requirement is to prevent price determination after grapes have been delivered for crush. In practice, however, the major purchaser continues to announce prices about the end of July. The impact of the law falls only on wineries who lag behind the leader in announcing prices.

Within California, the Federal-State Market News Service collects and disseminates contract information which some processors provide to them. Coverage is limited and reported irregularly for wine grapes and other fruit as available.

These state efforts are tentative steps to contract-price reporting, but do not provide information as to how a price reporting system should

work. Several useful pieces of information emerge, however. In North Carolina contract terms apparently have tended to standardize, making price comparisons more informative. If this tendency should occur as contract reporting is expanded, then a source of considerable complexity for such reporting would be removed. By analogy, one could argue that transfer and other internal price reporting requirements would tend to standardize appropriate accounting procedures. The Wisconsin experience demonstrates that mandatory reporting requirements may not be necessary to obtain cooperation. The California experience suggests the willingness of some market participants to voluntarily provide contract information in the absence of any statutory requirement.[3]

Conditions for Implementation

An improved market reporting system cannot be achieved unless several conditions are met. Among these conditions are a recognition of the need for information; resolution of legal questions regarding mandatory reporting; a willingness to enforce the rules; and the equitable application of policy to agricultural and nonagricultural sectors.

Mandatory reporting as a concept must be subject to some notion of cost-benefit analysis. Costs are easier to measure than benefits. They are measured in dollars and relate to the additional friction put on the system by a supervised, regulated system of transaction reporting. Benefits are more illusive because they are spread among market and nonmarket users.

The reporting system must account for varying information requirements if it is to be supported. For farmers, information needs vary according to market institutions and procedures. Farmers selling on volatile cash markets have a vital need for timely and comprehensive market reports. Those selling on contract markets at bargained prices may have little need for frequent price and movement information. Farmers need to know the negotiated price in order to compare estimated returns against alternative crop enterprises. They would like to know prices in other areas in order to evaluate the effectiveness of their bargaining association.

The legal implications of a mandatory reporting system remain to be tested. The privacy of contracts and internal accounting information has long been respected in the United States, and generally abridged only through subpoena power or confidential tax reporting requirements.

A willingness to enforce the rules is an essential condition for an effective reporting system. Voluntary compliance has been an important factor in the success of our national tax system. This compliance is partly the result of the visible willingness of the Internal Revenue Service and Justice Department to enforce tax rules. The flouting of Congressional intent about distributing the benefits of federal irrigation systems results from failure to enforce acreage limitations within certain irrigation districts. For a mandatory reporting system to work, the rules must be equitable and they must be enforced.

If and when the system encompasses mandatory reporting of transfer prices and business line results, then it must apply to nonagricul-

[3] The existence of a viable Forward Deliverable Contract Market as described in the paper by that title in this series would be a source of information on contract value.

tural sectors as well. To do otherwise would result in a discretionary economic policy. Compliance under such a condition would be difficult, if not impossible to obtain.

Clearly, establishing a mandatory market information system would not be an easy task. Further study of the legal implications and the appropriate sampling procedures are needed. The comprehensive system we have described might be implemented by first trying to report contracts, as done in Wisconsin, then expanding it to report contract prices when negotiated. Subsequently, reports of next level domestic and export movement could be initiated. Finally, appropriate legislation could be undertaken to permit reporting of transfer prices in vertical and conglomerate firms using a system tested by contract reporting.

Results Expected

The expected effect of mandatory reporting of market transactions is to make a structurally mixed system work more like a system containing many small firms which are coordinated by a market. Even though there would be large, integrated, and conglomerate firms in the system, they would provide the same kinds of information made public through transactions among small firms in open markets. This information would influence the actions of farmers, buyers, investors, and regulatory agencies, and increase consumer confidence.

More complete and reliable public information about prices, quantities, and qualities would improve market access for farmers. If one market location, product use, or marketing channel gave higher prices than another, this public information would give farmers a better basis for marketing decisions. Their production and selling adjustments would result in more profitable resource use and a more efficient system.

Market uncertainty would be reduced by better public market information. Since today's commercial farmers have large expenses for inputs they must buy, money borrowed at high interest rates is a major element in farm management. Financing these productive but expensive inputs will be greatly facilitated if market price uncertainty can be reproduced.

Prices resulting from more informed actions of buyers and sellers would likely be more equitable or fair. This is true where prices are determined by market forces (livestock) and where bargaining is involved (cannery crops).

Farmers would have a better basis for evaluating the benefits of integration or other initiatives if reliable public information on prices and costs were available. Many times farmer initiatives have been taken with only sketchy information concerning prices and costs.

Operation of a mandatory reporting system for major agricultural crops would have costs. The costs of operating the system would eventually have to be borne by the public taxpayer or shared by producers and consumers. Undoubtedly the mandatory system would cost more than the present voluntary system, but the results would provide more complete and accurate information.

Consequences

Mandatory collection and dissemination of appropriate information could enable farmers to make better production and marketing deci-

sions and improve competition. It is frequently argued that the basic policy for farm production and marketing is an outgrowth of very specialized political activities. In past times of less general communication flows and more isolated rural people, the "farm bloc" was a functional special interest group. As the nature of rural and urban constituencies change—with much greater participation in higher education and more communication in general—the very agrarian focus of farm policy is being lost. New participants in the policy formulation process include labor unions, consumer groups, and other sectors more broadly representative of society as a whole.

As consumers become a more active and vocal part of the emerging "food policy," the question of consumer confidence becomes an issue of significance. Public accountability of the food marketing sector is inevitably going to receive more careful scrutiny in the future than it has in the past. To the extent that these issues and political realities rise in significance, priorities must change. An approach to complex organizations in agribusiness requiring the disclosure of basic factual information as a cost of doing business, to be weighed against efficiency advantages of these large organizations, may become more tenable.

Even if agribusiness firms recognize the need for accountability and public responsibility, it is difficult for them to achieve it alone. Information flowing from a mandated disclosure policy is much more credible to the public than voluntary disclosure of the same facts. There are appealing arguments for a partnership between public and private initiatives in developing an information system. A mandated market information program would allow standardization which is essential if the reported facts are to be useful in analysis.

Another consequence of mandatory reporting of market facts would be its effect on our national competition policy. In many cases, controversial trade practices persist in situations where public information about prices and quantities is unavailable. When market information is made public, these practices come out in the open, and both regulatory agencies and market participants have a better view of what is going on. Where basic market information is publicly available, actions of responsible executives, board of directors, and regulatory agencies usually result in the reduction of unfair trade practices.

What Would Be Necessary To Get Mandatory Reporting?

Mandatory reporting would require new laws. Are the benefits worth the work to get the laws changed? What is the case for this proposal? As a society, we tolerate a wide range of private initiative in developing different organizational arrangements within the industry structure. Why? Because we have a basic belief in the usefulness of private initiative in the evolution of economic efficiency. Yet for private initiative to be effective, individual investors need information. If access to private opportunity is to be broadly spread, this information must be public. So the complex organizational form represents a dilemma: it is usually technically efficient, but it usually erodes the quality and quantity of public information.

The challenge is to weigh the efficiency advantages to society against the cost of providing to the public the information lost in the trade. A most direct way to do this would be to legally require complex firms to

absorb the cost of providing basic information to the public. If the cost of providing the "lost" information outweighed any technical benefits, then firms wouldn't integrate, and society would be left with a simpler industry structure. On the other hand, if the benefits within the integrated structure outweighed the cost of providing basic information to the public, then we would have a real benefit to society from the complex organization. It does not seem appropriate for the public to subsidize large private organizations by doing without the basic facts needed by farmers, buyers, consumers, investors, and public analysis.

Conclusions

The need for publicly reported market information has long been recognized. Also, we understand how complex firms and marketing organizations reduce the quantity and quality of marketing information available to the public. Yet we have relatively little experience in designing and implementing a system requiring basic information to be made public. A further—and perhaps more damaging—problem is that we have not carefully developed a rationale for requiring private firms to provide information to the public.

We conclude that it may be within the public interest to require private firms to bear the cost of supplying the information which their complex structure removes from the public sector. Further experimentation is required in the design and operation of a data system combining the initiative of public and private organizations. This experimentation and its cost may be justifiable as a part of our national competition policy.

EXCLUSIVE AGENCY BARGAINING

(By James D. Shaffer [1] and Randall E. Torgenson [2])

Introduction

In recent decades the structure of the food and fiber sector of the economy has changed from a decentralized, atomistic system to a vertically coordinated marketing system dominated by large-scale food chains and processors who demand assurance of adequate supplies on a regular basis. To assure supplies, these volume buyers arrange for partial- or full-supply contracts with producer associations or engage in contracting with individual farm operators. Such dealings are noted for the disparity in size and market power between the large-scale purchasers and the individual contract producers.

Besides the problem of disparity in marketing power, contract provisions are becoming increasingly complex. Contracts are known to differ among producers from the same region, depending on which firm they are contracting with. Contracts with different provisions are also offered by the same acquiring firm. It is generally recognized that handlers are not so concerned with the level of prices as with the fact that they are not paying more for similar products than are their competitors.

Invariably, contracting also encounters problems of enforcement. Complex contract provisions may not be carried out to the letter by the parties involved. A need has been felt by producers for a code of unfair trade practices to handle disputes over condemnations, weighing practices, contract cutbacks or cutoffs, and prompt payment for deliveries.

The natural outgrowth of each of the foregoing situations—the imbalance of marketing power between large-scale purchasers and individual contract producers, the need for standardized contract terms, and the need for a means to settle contract disputes—serves to identify the background for consideration of an exclusive agency bargaining arrangement in agriculture.

A Definition of Exclusive Agency Bargaining

The basic concept of exclusive agency bargaining includes as a minimum a bargaining unit consisting of a group of farmers producing a common product; a bargaining association which has the authority to represent in trade all farmers in a bargaining unit, whether members of the association or not; and a set of rules establishing rights and obligations of members, non-members and handlers.

Exclusive agency bargaining differs from voluntary collective bargaining by the fact that the exclusive agency bargains for price and

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other terms of trade which apply to all who are defined within an association, members and non-members alike. Collective bargaining with the exclusive agency grants more power and responsibility to the bargaining association than is usually possible under voluntary bargaining. It is similar to the rights of a union with an agency shop operating under the National Labor Relations Act where a worker does not have to join the union but must work under union-established conditions and must pay for union services.

Why Exclusive Agency Bargaining Is a Useful Tool

At its most basic level, vertical coordination involves the synchronization of supply and demand. Future demand and supply are uncertain, and coordination under uncertainty results in unsatisfactory system performance. By organizing farmers to contract for the future delivery of commodities to meet future demands, coordination of the food system can be significantly improved.

In order to carry out this coordination, the uncertainty of future supplies—the production decisions of other farmers and the weather—must be dealt with directly. Whereas individual contracting does little to deal with these basic uncertainties, exclusive agency bargaining deals explicitly with them. Under individual handler and farmer contracting large quantities of a product are outside of the contract system, and contracts are difficult to enforce. In such situations, handlers uncertain about future quantities and prices. However, an exclusive agency bargaining arrangement would allow the guaranteed performance on the supply side of the contracts, within the contingencies imposed by the environment. There would also be enforcement and policing of contract terms on the buying side that would contribute to the establishment of an effective contracting system. Vagaries of weather would be dealt with through terms-of-trade schedules.

In addition to these special features, exclusive agency bargaining with future production contracts offers producers better information on which to base production and marketing decisions, and shifts decisions about future demand forward in the marketing channel. The agency can allocate supplies in cases of market surplus and can negotiate to harvest and deliver only those quantities that will result in a return above variable costs. Demands for new products tailored to specifications can also be more easily accommodated through communication and price signals by the agency. Clearly, coordination and resource allocation are improved by use of exclusive agency bargaining through establishment of more reliable future prices around which farm operators and other market channel participants—each of whom have sizable investments—can avoid the uncertainty associated with otherwise gyrating prices.

Examples of Exclusive Agency Bargaining

Exclusive agency bargaining examples can be found where an organization, federation, agency-in-common or some combination of organizations is designated as exclusive bargaining agent for all farmers in a defined group. This arrangement may exist in a variety of structural forms under specific legal sanction, and/or under formal or in-

formal agreements between producer organizations. Instances are relatively few, and may be viewed as part of the cutting edge of new pricing arrangements sought by farm operators.

An example is the 1973 Michigan Agricultural Marketing and Bargaining Act which provides for exclusive agency bargaining for perishable fruits and vegetables through sanctions of a state board. Under the act a cooperative certified by the board is given legal rights to act as an exclusive bargaining and sales agent for all farmers, members and non-members alike, in a defined bargaining unit. Several other states have enabling acts supporting limited bargaining by farmers.

Another version of this concept is found in milk markets where cooperatives band together through a common marketing agency that negotiates over-order premiums with handlers for all member organizations selling milk on that local or regional market. A less formal arrangement can be identified in the division of labor between farm groups in California where the fruit and vegetable bargaining associations—to which operating cooperative members also belong—establish effective field prices for raw products moving to processors through negotiations with proprietary handlers. Finally, situations can be identified in European countries where general farm organizations, through formal agreement, have been given exclusive bargaining rights to represent all of agriculture in establishing wholesale prices through periodic negotiations with government authorities.

It is obvious from the examples cited that exclusive agency bargaining differs from traditional group action by farmers by virtue of a higher and more sophisticated level of organization, more explicitly defined rules that sanction and govern the activity, and by virtue of the focus on pricing activity at the farm gate or field level.

The Michigan Act represents the most formal structure for exclusive agency bargaining. Less formal arrangements involve the voluntary meeting of the bargaining agent with product buyers or government authorities on a regular basis to determine contract terms for goods and services furnished to them. Often the benefits of such pricing accrue to the non-joiners in the market as well as to the association members. While certain equity problems may exist in such informal negotiating arrangements, the association or exclusive bargaining agency nevertheless in effect represents *all* producers in the market through its actions.

Areas of Potential Use and Alternative Institutional Arrangements

The appropriate institutional framework for exclusive agency bargaining is dictated by the organizational discipline, custom, legal environment and nature of the contracting involved. In situations where contracting is the major method of marketing crops and no acceptable pricing arrangement exists, exclusive agency bargaining has the unique capacity to establish a climate for price discovery as well as the enforcement of those prices through the bargaining unit.

Highly perishable commodities produced in localized regions—fresh and processed fruits and vegetables for example—lend themselves most easily to use; however, the concept is not limited by these conditions or to these crops. As more livestock for slaughter is contracted or is mar-

keted direct to packers, a situation is established that lends itself to exclusive agency bargaining. Similarly, contract broiler production in which a marketable product is not involved easily lends itself to negotiations over growout fees and other terms of contract.

In some areas of the western United States custom dictates that a farm operator maintain a dual membership in a bargaining association and a marketing cooperative a bargaining association to negotiate field prices with processors, and a marketing cooperative for all or part of his marketings. Since the marketing cooperative is an integrated entity, no field price is determined. The farmer in this instance receives the residual price after operation and finance commitments are deducted from the selling price. Through dual membership, the bargaining association in effect plays a role as the exclusive bargaining agency by negotiating field prices for the whole industry. Prices negotiated by it alongside state or federal marketing orders become the prevailing field prices for these commodities.

In several European countries, the structural and functional dual membership role in pricing is more formalized.[3] The general farm organizations—as professional associations—have for over twenty-five years assumed, through formal agreement, a role as the farmers' negotiating agent vis-a-vis the government in establishing farm prices for the coming year. Products are extensively marketed through cooperatives organized along commodity lines and structured through regional and national levels, but it is the professional associations with support of the cooperatives, that are exclusive bargaining agents for all farm operators in the country. Prices in this institutional framework are negotiated by a farm delegation and a delegation of government officials on an annual or biannual basis. If prices paid by farm operators escalate or if industrial wage earners' pay advances to a point where farm operators are placed in a less equitable position, negotiation between the delegations reconvene. Farm prices vary throughout the year according to seasonal supply and demand patterns around the negotiated price.

In the case of milk marketing, cooperatives in this country have banded together through a common agency for in-common marketing. These marketing agencies are the exclusive pricing and sales agents for fluid milk sold to handlers in regions or major metropolitan areas on behalf of cooperative members located within an area defined by federal milk marketing orders. In some instances the agency-in-common has negotiated premiums commonly called "over-order premiums," above the "minimum" federal order milk prices. In this institutional arrangement pricing occurs in association with an existing maketing mechanism, the federal marketing order which prices products uniformly to all handlers.

Advantages and Disadvantages of Exclusive Agency Bargaining

It is difficult to list the advantages and disadvantages of exclusive agency bargaining because of the many different ways it might be organized and regulated. The design of the enabling legislation and the actions taken by farmers and their associations will determine the

[3] For a more lengthy description, see Randall E. Torgerson, "Farm Bargaining," Oslo: Landbruketsforlag, 1971.

benefits and costs. Also, an assessment of advantages and disadvantages must be carried out in the context of who benefits and who pays the cost, as well as in comparison to some relevant alternative. Limits of space preclude an extensive comparison. Thus, the comparison is with the current mixed-marketing system. In the following analysis we will assume national commodity-wide bargaining for pre-production contracts.

Possible benefits or advantages to farmers

1. An assured market at acceptable terms of trade before current production decisions were made.
2. All farmers would be assured equal access to marketing information, a major benefit of the proposal.
3. Farmers would have input in determining acceptable terms of trade and quantities to be marketed. Because all terms of trade could be negotiated, farmers would be able to avoid some of the extreme uncertainties of the market, avoid large losses due to unanticipated market prices and, in general, be able to plan on the basis of certainty.
4. Exclusive agency bargaining is a self-help program and would involve relatively little cost to the federal treasury. Unlike federal price support programs, farmers would receive benefits through the market. They would participate in the economy more on a par with large corporations, organized labor, and professional groups.
5. The exclusive agency would represent all producers of a given commodity and reduce the proliferation of competing organizations and the associated costs.
6. Non-joiners would be required to share the costs of collective bargaining and thus eliminate the costs and problems of the free rider who benefits from other farmers' investments in building and maintaining a bargaining association.

Possible costs or disadvantage to farmers

1. As compared with an open market the individual farmer has less choice by having to accept terms negotiated by his association. Nonmembers may feel they, especially, have lost independence of action.
2. Substantive costs are involved in organizing and operating bargaining associations: members must be recruited; presentations must be made before hearings; records must be kept; information must be supplied to unit members; data must be collected and analyzed; collective decisions must be made; and long hours of negotiations must be supported.
3. There are inevitable conflicts of interest among bargaining unit members. Settling these conflicts can cause ill will and impose costs on those whose preferences or interests are less well-served by the association.
4. A bargaining association can make mistakes. When a mistake is made, large numbers of members suffer, in contrast to an individual farmer suffering from his own mistakes. The association will have the characteristics of a bureaucracy and will not be completely responsive to its members' needs and preferences.
5. The organizational procedures are sophisticated; there is a lack of experience; standard operating procedures have not been established and are shrouded in legal technicalities. The legislation and specific actions would be tested in court. Uncertainty and costs would increase during the period of court testing.

6. For some commodities exclusive agency bargaining would be a substitute for vertical integration into the marketing channel by farmer marketing cooperatives. Farmers would have to look at the trade-offs between bargaining and vertical integration.

7. The actions of some farmers or farm groups to use an exclusive agent law would likely be viewed by others as a direct effort to take away their rights.

Possible benefits or advantages for buyers

1. Processors and retailers could improve the reliability of supplies of highly specified products, thereby reducing uncertainty and increasing their efficiency. They could also better plan production and promotion.

2. A mechanism would be established for government enforcement and association policing of contracts.

3. The association would assist in assembly, in identifying available supplies, and in negotiation of contracts—services that now must be purchased by buyers.

4. The process of negotiation would generate much better information about future supplies and commodity-wide demand and thus reduce the risks of mistakes by processors and retailers.

Possible costs or disadvantages to consumers

1. In dealing with an organized group, buyers might be forced to pay higher prices and lose some independence of action. They could no longer profit from having information superior to that of individual farmers.

2. Buyers, too, would have costs associated with negotiating and legal actions.

Possible benefits and advantages for consumers

1. Consumers could expect to get a more uniform and reliable supply of a commodity with less variation in price and quality characteristics.

2. Improved coordination could result in reduced costs between the farm gate and the consumer and thus lower prices.

3. Lower prices could also occur to consumers by reducing risk and uncertainty to farmers.

Possible costs or disadvantages to consumers

1. Consumers might pay higher prices on the average if farmer associations were able to bargain for higher prices which exceed cost savings.

2. Consumers may suffer from disruptions in the flow of bargained commodities during the "learning period" for bargaining associations. If farmers expect too much, or if handlers attempt to "buck" bargaining associations there may be temporary costs to consumers. There is likely to be a period of time during which both farmers and handlers must adapt and learn to relate to one another in a new framework.

Possible benefits and adantages for the government

1. Congress could take the position that it provided a mechanism for farmers to help themselves and thus could avoid the conflict between consumers and farm groups involved in establishing farm price and income policies.

2. The drain on the treasury for support programs could be reduced.
3. The bureaucracy established for farm programs could be reduced along with the costs of storage programs and associated risks.

Possible costs or disadvantages to the government

1. The cost of the board and associated legal costs involved in establishing the new system would be the responsibility of government as would the ongoing administrative costs associated with maintenance of the board and its research needs.
2. Political conflict would arise over the appropriateness of the legislation and the conduct of the board and associations.

The Design of Enabling Legislation

A national Agricultural Bargaining Board (the board) could be established within the Department of Agriculture and would be responsible for implementing the law and supervising activities under the law. This is one possible way to establish an exclusive agency bargaining arrangement.

An important function of the board would be the definition of appropriate bargaining units. A bargaining unit, petitioned by a group of farmers, could be defined in a variety of ways ranging from all of a specific commodity sold to a single buyer to all of a commodity sold in the United States. The definition could also be for all of a specific product sold in a geographic area, or the unit could be defined in terms of variety of the commodity, the use of the commodity (all potatoes sold for processing or for making potato chips, for example) or be limited to a particular season of the year (all late onions, for example). The board would be instructed to define the largest bargaining unit consistent with the desires of the producers and the workability of the bargaining unit i.e., the potential conflicts of interests among groups of farmers within the unit, the potential for identifying and separating the commodity, and the feasibility of getting the necessary information identifying producers and buyers.

No bargaining unit could include more than one commodity. This would limit the market power of a bargaining association.

The definition of a bargaining unit would also determine the inclusion or exclusion of commodities produced by handlers and sales to cooperatives. Since cooperative members would benefit from establishing prices and other terms of trade for the commodity, it is not illogical to include them within the bargaining unit even though they would theoretically be bargaining with themselves.

A mechanism would be established to modify the definition of the bargaining unit based upon changes in conditions and farmer preferences.

A procedure would be established for accrediting an association of farmers to be the exclusive bargaining representative of all farmers within the defined bargaining unit. The procedure suggested is that an association would have to provide valid evidence of signed contracts from more than 50 percent of the farmers who were in the bargaining unit the previous year and who produced more than half the commodity within the bargaining unit the previous year. The contracts would clearly state that the farmer was naming the association as his exclusive bargaining representative and that he understood that it would place him under the rules of the bargaining legislation.

Rules established to regulate the accredited associations would include: (1) no farmer could be excluded from joining the association (2) all members would have equal rights to vote and have equal access to the benefit of the associations (3) democratic by-laws would have to be established (4) the association could not discriminate among members within the bargaining unit (for example, it could not negotiate terms of trade for members of the association which differ from those of non-members), and (5) all bargaining authority would be vested in a bargaining committee which would consist of only members of the bargaining unit and be elected by members of the association.

Accredited associations would be entitled to negotiate price and all terms of trade. They would not be allowed to limit entry into the bargaining unit but would be allowed to establish marketing quotas in order to tailor supplies marketed to the demand at the negotiated terms of trade.

The board would establish dates by which time negotiations would have to be completed. These dates would be flexible according to the situation of each commodity and could be adjusted to the changing annual situation. If negotiations were not settled by a specified date, mediation and fact finding would be required. If settlement were not accomplished by a stated date, compulsory arbitration would be required. A procedure appointing a "fair" arbitrator or arbitration panel would be specified. Arbitration is necessary for agricultural commodities because of their perishability.

It would be illegal for any farmer to sell a commodity defined within the bargaining unit except on terms negotiated by the accredited association and it would be illegal for any buyer to buy a covered commodity except at these terms.

A procedure for losing accreditations would be established. If an association failed to meet the accreditation requirements of representing 50 per cent of the producers who sold 50 per cent of the commodity within the bargaining unit for two successive years it would lose its accreditation. Similarly, if a grievance were filed by a member of the bargaining unit claiming the association was not meeting requirements for democratic procedures or for non-discrimination, a hearing would be held. If the association were found to be in non-compliance it would be warden and, if adequate remedy were not taken, the board could withdraw accreditation.

The board would define the buyers' negotiating unit consisting of those buying commodities covered by the bargaining unit. Buyers would be required to register with the board and the bargaining association. The negotiating unit for processed products would usually be the processors (rather than assembly buyers, for example), and for fresh products the negotiating unit could be retailers or associations of retailers or wholesalers. Intermediate buyers would be designated as agents for the negotiating units and would be required to buy on the terms established by negotiations, allowing for a fair return for the service they perform. The appropriate negotiating units will vary from commodity to commodity and according to the use of the commodity. Determining the appropriate level for negotiation would be an important and difficult task of the board.

Bargaining prior to mediation would be between individual buyers and the association; however, the association would be obligated to in-

form all buyers of any settlements in order to avoid discrimination. If mediation or arbitration were required, buyers could be represented by an association of buyers organized under procedures established by the board. Guidelines would be established for representation of the buyers' association and to assure equitable treatment, adjusting among buyers for differences in transportation, quality, or service.

The law would exempt associations of farmers and buyers from antitrust laws for those activities sanctioned by the board. As a trade-off for the antitrust exemption, settlements under the act would be subject to review for undue enhancement of price by a three-person commission appointed by the President. A precedent for this exists in the Capper-Volstead Act.

The board, responding to the initiative of an accredited association, would establish one of the three types of bargaining, based upon the market situation for each commodity and bargaining unit:

The first type of bargaining would be for forward deliverable contracts. The guidelines for the board would be to adopt this type of bargaining whenever feasible. Contracts would be negotiated prior to important production decisions by farmers and would result in production decisions consistent with the anticipated demands of buyers, a major breakthrough in coordinating supplies and demands for farm products. The association would thus act as an agent in determining the quantities of commodities bargaining unit members would be willing to supply under different terms of trade. Contracts could be negotiated with contingencies to deal with variations in supply due to weather or other unforeseeable events.[4]

The second type of bargaining would be for the association to negotiate the terms of trade, provide information about supplies and demands to producers and buyers, but leave the actual marketing up to the producers and buyers. The association would not disrupt established relationships but would establish the conditions under which exchange would take place. This type of bargaining would attempt to set terms of trade consistent with anticipated conditions of supply and demand. These negotiated terms of trade could also allow for contingencies of weather and other unforeseen factors affecting supply and demand.

The third type of bargaining would be similar to the second except that the association would act as the exclusive sales agent for the bargaining unit members and would be obligated to find markets for all products and to allocate supplies among buyers. This would grant more power to the associations and would result in bargaining to assure that supplies and demands matched. It would be a less effective coordinating mechanism than the forward deliverable contracts but more effective than simply establishing the terms of trade. It would also be much more demanding on the association.

Operations of Associations

Enabling legislation providing the framework for exclusive agency bargaining is a farmers do-it-yourself marketing policy kit and is very flexible. The outcome would depend to a large extent on the ability of farmers to organize effective, responsible associations.

[4] See also, Sporleder and Holder, "Forward Deliverable Contract Markets" in this series.

The decisions of farm organizations and farmers in defining the bargaining unit, in determining the type of bargaining (i.e. over forward contract terms, acting as exclusive sales agent, or simply establishing terms of trade), and in setting marketing quotas and many other aspects of strategy would be critical in determining performance. The costs of organizing and the internal management problems would be greatest for an association representing a bargaining unit for all of a product produced in the United States and bargaining for terms for forward contracts. This alternative would also provide the greatest opportunity for effective coordination of supply and demand and capacity for the association to establish favorable terms of trade for its farmer members.

Least costly in organization and management would be bargaining establishing terms of trade for a single buyer. This also offers limited advantages in both setting terms of trade and as a coordinating mechanism. An association would not wish to impose terms of trade which would put a buyer at a disadvantage compared to his competitors. At the same time, bargaining could assure that producers were getting terms of trade equivalent to those offered by other buyers, could assure equal treatment for all producers selling to the buyer and could establish delivery schedules, quality characteristics and other important non-price terms of trade.

Many possibilities lie between these two extremes of individual buyers and national bargaining. The type of bargaining which would evolve for each commodity would depend upon the circumstances of each market situation and the preferences of the majority of farmers.

Methods of Achieving Exclusive Agency Bargaining

A very substantial amount of work would be required to obtain exclusive agency bargaining legislation. Since the design of the legislation is critical, time, effort, analysis, and debate will be required to determine appropriate and workable rules. Farmers will have to recognize the rights of buyers and consumers and make adequate provisions for their protection. Farmers must also invest their time and money in developing responsible and competent associations to represent them as exclusive bargaining agencies.

Major organizational and information efforts would be required to put across this concept to farmers. Once farmers were convinced this was a desired approach, a major public relations and lobbying activity would be required.

Because of the uniqueness of the exclusive agency bargaining approach, it would probably be desirable to gain experience on a smaller scale within a state and with limited commodities before adopting a general national policy. The bargained contract system would need to evolve from the success and failure of these efforts. Since the gains from limited efforts are marginal and costs substantial, farm groups will have to be willing to invest in the experiments.

The major payoff to society from the exclusive agency bargaining concept is in supply planning and management. As a production planning mechanism, this system organizes the marketing process in a way that provides for discovery of terms of trade, including price, as well as efficiency in commitment and use of resources over the longrun.

We have outlined the major provisions of possible legislation establishing exclusive agency bargaining as a national policy and specified some standard operating procedures for bargaining associations operating under this legislation, important because the rules and operating procedures are critical in determining the effectiveness and acceptability of exclusive agency bargaining. Note that exclusive agency bargaining in the exact form we have outlined does not exist, thus we cannot give empirical evidence of success, failures, and problems associated with this alternative. As with all the alternatives discussed, the authors are describing an alternative and are not advocating its adoption.

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VERTICAL INTEGRATION THROUGH OWNERSHIP

(By William E. Black [1] and James E. Haskell [2])

Introduction

To integrate means to combine two or more stages in the production-processing-servicing-marketing complex under one management. Integration is of two types: horizontal and vertical. Horizontal integration achieves economy of scale and market power by (horizontally) combining similar functions. An example of this is cattle feeders who forego individual feeding operations and turn to a large feedlot to feed out their own cattle as well as custom feed. Horizontal integration is not part of this paper.

Vertical integration is defined as ownership-participation in two or more steps in the total production-processing-servicing-marketing complex by a single business organization. Vertical integration may be either forward or backward. This paper focuses on forward integration (toward the retailer) by producers for their products rather than backward integration (toward the producers) by the food processor, converters, or retailers for the products they need. From a producer viewpoint, vertical integration means financial participation in facilities and operations of two or more production, processing, or marketing stages for the commodity he produces. Some farmer cooperatives engage in backward integration into the farm input supply industries by owning oil wells, phosphate and potash mines, and manufacturing plants.

Vertical integration can also be achieved under centralized management through the use of contracts or agreements. Here the decision of two or more firms is coordinated through contracts or agreements although ownership may not necessarily be passed from one firm to another.

Vertical integration is not new. It was the common method of agriculture among our self-sustaining settlers who produced, processed, and consumed their food within the family. Later, as the era of specialization emerged, more and more of the functions were transferred out of the home or off the farm. Separate specialized businesses were created. At first these tended to be single-function businesses. Still later, more and more functions were combined to bring about economies and control in the operation. The English woolen industry was perhaps the first instance of modern vertical integration. Here a single firm carried on all processes, from the preparation of the raw material to weaving, dyeing, and finishing.

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This paper is concerned only with vertical integration by producers through ownership. Vertical integration through contracts or agreements is not considered. Separate papers examine these marketing alternatives.[3]

Individual and Group Integration

Farmers and ranchers may engage in vertical integration through ownership either as individuals or as a member of a group. Individual integration includes self-sufficiency practices of canning and freezing. on farm retailing—including pick-your-own—preconditioning, and feeding out calves formerly sold at weaning time. Individually owned, vertically integrated businesses are usually internally developed private proprietorships, that is, the owner adds step-by-step to his own creation, not through purchase.

Group integration opportunities are much greater than individual. The steps in the integration complex may be purchased or developed, and the group-integrated organization may be partnerships, a regular corporation, or a cooperative corporation.

Ownership integration requires more than a mere investment for its success; it also requires patronage. In a marketing cooperative, for example, producer members must deliver their production, including title, to the cooperative. Critical further handling, processing, and marketing decisions are assumed and made by the cooperative. These commitments are spelled out in a marketing agreement between members and the cooperative and are enforced by the board of directors.

Examples of vertically-integrated ownership by farmers include:

Individual Vegetable Grower Shippers.—Larger, more successful vegetable growers extend ownership in their crop through harvesting, sorting, sizing, packaging and shipping by investing in operations to make direct sales to a retailer or hotel-restaurant-institutional distributor or by contracting to have certain functions performed by someone else. Producers who grow vegetables without a contract and turn their crop over to someone else to market are few in number. By combining marketing with production the grower strives to extend his control over the pricing and the marketing processes, reduce costs, and increase efficiency.

Cooperative Corporation.—Formed in 1973 through a consolidation of three local ginning organizations in west Texas, the American Cotton Growers (ACG) rapidly expanded into a completely integrated, producer-owned cooperative. Initial objectives were to increase the profitability of cotton farming by reducing off-farm handling costs and by marketing better cotton and cotton by-products. The producers recognized that ginning, compressing, storage, and marketing were separate profit centers, each operating independently and each taking a bite out of the value of their crop. They therefore created a single organization to control all post-harvest operations for their products. Each member commits cotton acreage to the cooperative and is responsible for growing, harvesting, and storing the crop.

ACG assumes responsibility for all subsequent functions—loading and hauling seed cotton, ginning, packaging, lint transportation, storage, and marketing. In conjunction with the gin, ACG also operates a

[3] Joint venture arrangements, a form of integration, is discussed in a paper in this series titled "Joint Ventures Among Cooperative and Non-Cooperative Marketing Firms."

burr pelleting plant which converts that by-product into cattle feed. All cotton is placed in a seasonal pool for merchandising and distribution flexibility. Each producer receives the average selling price for the crop, less all costs and any capital retains approved by the board of directors. From some 40,000 cotton acres originally committed to ACG, the cooperative now draws from more than 250,000 acres. In addition, ownership-integration has advanced to a textile facility that will process cotton into finished denim fabric. From ownership of his product through only immediate post-harvest a few years ago, an ACG farmer-member can now derive benefits through the sale of cloth to cloth manufacturers.

Corporation.—Monfort of Colorado started as a cattle feeding operation in 1927. While the feeding operation grew in size, it remained essentially unchanged in form until the 1960's. At that time the company integrated backward into feed grains by acquiring elevators in Kansas and Nebraska. These served as sources of feed supplies. In 1960 Monfort established a packing plant near the feedlot. Feedout capacity increased steadily until it reached 110,000 head in early 1970 when a second feedlot of equal capacity was built, boosting total feeding capacity to 220,000 head at one time. Packing-plant capacity was also expanded. At the same time Monfort began selling meat through company-owned purveyors. With its feed-grain procurement system and meat-marketing system, Monfort became a vertically integrated operation. The nature of Monfort's vertically-integrated-through-ownership operation was concisely described in a 1970 prospectus prepared by underwriters of Monfort's public stock offerings:

> The Company principally engages in purchasing feeder or young cattle, feeding them until they are ready for slaughter, slaughtering, breaking, fabricating and portioning cattle and lambs and selling individual serving cuts, fabricated cuts, primal cuts and dressed carcasses of beef and lamb and their by-products to wholesalers, retailers, and others throughout the country and in foreign markets.

Marketing Cooperative.—American Rice, Inc. (ARI), a centralized cooperative, was incorporated in the State of Texas in 1969 to market members' rice. It first developed and implemented uniform, statewide grading standards and then added a statewide market information, inventory, an analysis system. In 1971 ARI initiated a successful statewide cooperative marketing program for rough rice with 475 rice farmer members representing about 23 percent of Texas' rice-producing acreage. Producer-members were required to commit their rice production on a marketing agreement and pooled basis. In 1973 ARI expanded its marketing service to include Louisiana growers, and, a year later, engaged in custom milling of members' rice. In July, 1975, ARI acquired Blue Ribbon Rice Mills, Inc., a cooperative. At that time it had approximately 325,000 acres of production under marketing agreement with 75 percent in Texas and 25 percent in Louisiana. It now markets milled rice under Blue Ribbon and other established brands. ARI returns to members consistently higher prices than nonmembers receive.

The above are examples of specific integration indeavors and provide and represent only four means out of many possible ways in which farmers can integrate forward. But what is necessary for success in forward integration?

Requirements for success

There are a number of factors that would tend to make vertical integration successful. The most important include:

A Permissible Environment.—The general public plays a part in determining how agriculture is structured and controlled. Actions—or lack of them—by the government may reflect public attitudes toward integration of the food and fiber system. Integration through ownership would face severe obstacles if these attitudes were unfavorable.

Ownership of all phases involved in the vertically integrated process. The key here is to own the product through as many pricing points as possible, even though necessary handling or processing facilities may not be owned by the integrator. For example, a firm might ship grain through an export elevator on a per bushel fee basis without owning or controlling that port facility; however the firm owns the grain until purchased directly by the foreign buyer.

Capable Management and Staff.—Because vertical integration extends ownership, sophisticated management is required. Most critical is marketing expertise in the many cases where a firm is engaged in product rather than commodity marketing. Decisions of the firm are guided primarily by information derived from the market place, not production information. This becomes especially clear when vertical integration includes dealing directly with retailers and consumers.

Predictable Supplies.—Vertical integration is economically unsound if supplies are uncertain either in terms of quantity or quality. Long-term marketing arrangements cannot be consummated without supply assurance. Corporate planning for physical, financial, and management efficiency is also constrained by uncertain supplies.

Adequate Capital.—Vertical integration requires additional capital for financing physical facilities, management, and the commodity itself. While capital needs for vertical integration are initially quite large, financing the integrated operation after it is successfully established is usually not difficult.

Efficiency.—The vertically-integrated process must be operated efficiently to remain competitive. Key considerations include the scale of operation necessary to achieve economies in production, sufficient market impact, and increased output relative to inputs. Vertical integration can bring together technologically complementary production processes under single ownership and management. It eliminates some sales transactions and increases profits to other transactions. Efficiency also can be achieved by improved coordination of the rates, amounts, and quality of output at successive stages.

Market Access and Growth.—A market must be found, maintained, or expanded for products produced by farmer-owners. Vertical integration can achieve market access faster if the product has an increasing demand, that is, a higher percentage of the population consuming the product or consuming it at a higher rate or both.

The Consequences of Vertical Integration

Effects of a partially or fully integrated agriculture would be felt with varying intensities by many different individuals and groups: farmers and ranchers, integrated firms, consumers, the community, and

the general public. Since producers own, and presumably control, the businesses in an industry vertically integrated through ownership, consequences to farmers and integrated firms are considered together.

The Participants.—Producers involved with integrated firms might lose some of their on-farm decision-making prerogatives. The critical decisions on assembling, processing, servicing, and marketing could be transferred to the firm center. Most of the decisions remaining with the farmer would relate to production, but even some of those—when and how much to produce, and variety planted—might be made beyond the farm level. As a member of a cooperative, the producer would have some input about what decisions are transferred to the cooperative.

Farmers and ranchers are also expected to make firm commitments to the integrated system. Part of this commitment may be the requirement that the participant deliver all or a major part of his total production to the system and purchase most of the supplies needed in production from that same organization. Other commitments may be in terms of contributing money, either through direct investment or by capital retains. The integrated firm must have these types of commitments to carry out its stated objectives; however the competitive success of integrated firms depends more on what the producer delivers than what he invests.

Participation in vertically integrated firms should provide farmers and ranchers sufficient benefits to compensate for loss of marketing freedom. One benefit is the transfer of the risk of some price fluctuations away from the producer. Prices for farm products in an integrated firm are determined by formula, pools, blends, or other methods outside the traditional open market and represent some kind of "average" price over the marketing period. No longer would the farm-gate price determine success or failure of the farming operation.

Producers also share in any profits (or losses) generated at pricing points added to the integrated system. Vertical integration increases the market power base of producers by extending ownership control of assets and products. Other potential advantages accrue to vertically integrated business, including more efficient resource allocation, reduction in costs, and incentives for technological advance.

An industry vertically integrated through ownership does not reflect commodity and product prices at the various stages of the system. Several groups might be interested in those prices for different reasons—producers, consumers, the competition, and perhaps even the government. Many integrated firms accumulate profits at only one stage of the total operation, accounting for other transfers at cost; others make no attempt to determine prices at each level. When integrated operations account for a large part of total industry volume, it is nearly impossible to accurately reflect prices associated with the product or commodity. This makes it especially difficult to monitor or control, even by producers, integrated operations from an equity standpoint.

In many cooperative marketing arrangements only partial payment is made to the producer at time of delivery. The balance is paid after the cooperative sells the product. Producers might find it difficult to adjust to a system which doesn't pay on delivery. Many producers prefer to use the open market price as a continuous barometer of how they're doing pricewise in marketing their production.

Vertical integration can increase or decrease competition within an industry, depending on the concentration of that industry at the time integration is introduced. If the industry is already dominated by a few large firms, integration would tend to increase competition; but entry of vertically integrated firms into a dispersed market structure can lead to decreased competition in the industry, particularly if the number of firms in the industry is reduced as a result of that integration.

The extent of integration also affects the conditions of entry and exit of firms. If vertical integration is successful and captures a significant portion of the market, other firms will find it difficult to enter the industry, especially if the integrated firm captures that market share via a brand product. Entry into many industries is virtually closed today because of the existence of successful integrated firms.

Finally, successful integrated firms are market oriented. In effect this means the firm combines business and marketing functions with the tools of management in a mix that best serves consumer wants and needs and is still consistent with the objectives of the producer-owners. Vertical integration can provide access to the retail shelf. The goal of market orientation is to own the product through as many pricing points as the integrated firm can convert into profit points. The latter point serves as a guideline for further vertical integration. There is an incentive to expand only so long as ownership through another pricing point is profitable. The economic limit to ownership-integration is determined in that manner.

To summarize, producers can potentially benefit from a vertically integrated system by higher profits (a combination of reduced costs, more efficient resource allocation, and ownership of the commodity or product through more than one pricing); reduced risks; and market power. Most of the disadvantages arise from a necessary change in the traditional way of doing business. Producers lose some of their decision-making power in marketing; have to make binding product and financial commitments to the system; and lose the option of selling their production in the open market.

The Community.—Vertical integration by farmer cooperatives might aid in preserving existing rural community patterns by maintaining the role of the individual farmer. Because ownership of productive resources remains at the local level there is greater producer involvement in decisions to locate additional production and marketing facilities. Integrated businesses located in a community create a larger tax and employment base and increase service demands. On the other hand, some communities would suffer by not having the businesses located in their proximity, or by having supply procurement take place outside the area. Increased integration through ownership would result in some reduction of the total work force in agriculture-related functions, and local decision-making could be lost if integration was brought about by outsiders.

The Consumer.—Integrated systems have the potential to achieve greater cost savings from coordination of production, processing, and distribution, and the elimination of unneeded facilities, but lower costs of food and fiber to consumers cannot be assured. It may prove socially and economically detrimental to consumers. Producers might gain and consumers suffer higher prices if the market power achieved by the integrated firms is used to reduce competition and restrict supplies. On

the other hand, if consumer demands are accurately identified, the producer-owned system could quickly respond with more and higher quality products. Producers are more apt to engage in new product development, marketing innovations, and other consumer responses if they are part of a vertically integrated system.

The General Public.—Integrated firms would be expected to take on a larger share of research, development, and education programs now funded through state and federal taxes. The complexities and individuality of integrated operations require greater research on their part. Widespread vertical integration might also reduce needed government expenditures for the price support program.

Methods of Achieving Vertical Integration

Farmers and ranchers who want to be a part of an integrated system can either do it as an individual or as a member of a group. Those who wish to go it alone must develop the system over time. Those who opt for membership in a group can also develop the system over time; or, they can buy it. Most commercial farmers engage in vertical integration through ownership as a member of a group because risk can be spread out over more producers, capital requirements per farmer are less, and the opportunities for success are enhanced through a bigger scale of operation, export management, and marketing skills.

One-Person Integration.—Farmers and ranchers can, and have, developed integrated businesses on their own. This is illustrated by the cow-calf producer who decides to retain ownership beyond weaning. Assuming part of his land is suitable for cultivation, he could reduce his cow numbers and put some land into small grains for feeding after the calves are weaned. (Supplemented grain may be fed while calves are on the small grain.) If the land of the cow-calf producer is not suitable for cultivation he can still integrate vertically by custom grazing his calves on someone else's land at so much per pound of grain. Regardless of which practice is followed, ownership in the calves is retained. After preconditioning, calves are normally sold. The degree of vertical integration can be extended by retaining ownership through the feedlot. If followed this system would extend control by the cow-calf rancher (he participates in more than one pricing point) and reduce the number of sales the calf goes through. It could increase efficiency and profits and/or decrease costs.

It is important that producers who want individual integration recognize how conditions change from their usual mode of operation. First, more money is required over a longer period of time. Whenever additional functions are assumed, the capital requirements also increase. In the cow-calf example, the producer must obtain capital to purchase the machinery and supplies required to raise grain, or to pay rent if he decides to custom graze the calves and carry the inventory longer. Second, the type and quality of management required to run an integrated operation differs from a nonintegrated, traditional, production-oriented farm operation. New management skills must be learned or acquired. Finally, producers must be willing to live with postponed income, especially for the first year or two. Benefits from ownership integration are not immediately available because it takes time and money to develop an effective and profitable system. Initial

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cash flow problems may be eased somewhat through careful attention to accounting methods. For example, it might be easier for an individual to integrate forward if he changes from the cash to the accrual basis of reporting taxable income.

Group Integration.—Producers at times can more easily integrate forward through ownership as a part of a group. A producer can either join other producers in common ownership of corporation or become a member of a marketing cooperative. The organization may already be integrated through more than one pricing point—marketing, processing, and retailing—or may be a single function operation. In other cases, farmers can join together to form a brand new integrated organization: by combining their money and ideas, they can either purchase an operation outright or develop what they want over time.

Farmers and ranchers have many good reasons for joining together in an integrated system rather than trying to develop it as individuals: they can probably achieve the efficiencies of economies to scale; they can hire expert management; marketing decisions can be moved up to more appropriate levels; large capital investments for physical facilities can more easily be made; members have the opportunity to share in marketing profits; and participants are protected, to some extent, from price fluctuations for their particular commodity.

Farmer cooperatives currently face the danger that legislation undergirding their very existence might be seriously eroded by either legislative, judicial, or administrative action. The Capper-Volstead Act is of greatest concern. Without it farmers could not even form a cooperative for the purpose of jointly marketing their products. If farmers and ranchers desire to continue to use cooperatives as a means of integrating forward then they must insure continuation of the kind of treatment provided by Capper-Volstead.

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JOINT VENTURES AMONG COOPERATIVE AND NON-COOPERATIVE MARKETING FIRMS

(By Lester H. Myers,[1] Michael J. Phillips,[2] and Ray A. Goldberg[3])

Introduction

Coordination of marketing activities may be obtained through joint ventures between agricultural marketing cooperatives and non-cooperative agribusiness firms.[4] Joint ventures are defined here as associations between two or more participants organized for the purpose of implementing and conducting a specific marketing operation or enterprise. The identities of the participants remain apart from their co-ownership or co-participation in the venture. Participants share—on an agreed basis—expenses, profits, losses, risks, and some measure of control over the conduct of the venture operation. Various forms of business organization (partnership, corporation, or cooperative) may be adopted for the conduct of the venture's business. While the venture may perform one or more of a variety of marketing functions, it is assumed here that the activities involve either a direct marketing function or the procurement or manufacturing of inputs needed in the processing and/or marketing functions. Contract agreements for the sole purpose of assuring a supply source or a market outlet are not considered joint ventures within the context of this paper.

Many factors may serve as motivating forces for the creation of joint ventures between cooperatives and non-cooperative firms. Producer cooperatives may see the venture as a way of gaining access to consumer markets, some assurance of potential price premiums, and the opportunity to realize the benefits of economies of scale. Agribusiness firms may be looking for partial insulation from uncertain commodity supplies, for access to lower credit costs, or possibly for a way to minimize the effects of possible governmental price freezes and other regulatory policies.

Joint ventures between cooperative and non-cooperative corporations have received further impetus as producer groups and off-farm operators attempt to coordinate not only the United States domestic commodity systems but the international ones as well. It is very possible that some of the more meaningful joint ventures may develop between commodity producers in the United States and multi-national agribusiness firms in other countries and vice-versa.

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[4] Editor's Note.—Joint venture arrangements imply ownership by two or more corporate entities. Agricultural economists tend to refer to this as integration in the sense that one firm has now entered into partial ownership of another stage in the production or marketing channel.

In the following section, several examples of existing joint ventures are summarized. These particular examples are selected to illustrate diverse motivations, types of projects, and degrees of success associated with joint ventures.

Examples of Existing Joint Ventures

Agway—Curtis-Burns—Pro-Fac.—In 1960, Agway, a producer cooperative based in Syracuse, New York, was instrumental in consummating a merger between Curtis Brothers and Burns Alton, two small fruit and vegetable canners. Agway took a 58 percent stock interest in the new company and then formed Pro-Fac, a cooperative that supplies raw commodities to Curtis-Burns.

Curtis-Burns leases the plants owned by Pro-Fac, processes the crops of Pro-Fac grower members, sells the finished products, and pays Pro-Fac from the proceeds. Curtis-Burns also uses funds borrowed from Pro-Fac as working capital. This arrangement gives Curtis-Burns high capital leverage.

Pro-Fac grower members supply about 90 percent of the crops processed and sold by Curtis-Burns. Members' principal crops are green and wax beans, corn, beets, green peas, cabbage, asparagus, tomatoes, potatoes, and apples. Curtis-Burns sells about 60 percent of its volume directly to chain buyers and the remaining 40 percent to brokers. About 90 percent of its products are processed for the private label trade. Growers are paid 50 percent of the estimated commercial market value of their crops 30 days after delivery of their entire crop. Commercial market value (CMV) is defined as the average of what the industry is paying in the appropriate market area. An additional 25 percent is paid within 120 days after delivery, and to the extent earned, the balance of the CMV is paid as soon as is practical after the close of the fiscal year.

While net proceeds from Curtis-Burns sales fell below commercial market value in 1970, the growers have received price premiums above CMV from 1971 through 1974.

The major advantages of this joint venture are:

- A guaranteed market for Pro-Fac grower members and the potential for price premiums.
- An assured supply of raw product to Curtis-Burns from the cooperative avoids underutilization of processing capacity.
- By owning the facilities as well as supplying the raw product, the cooperative can transfer the savings to the producer who is taxed on an individual basis, thus generating a faster cash flow for Pro-Fac.
- The management team and certain other employees of the Curtis-Burns company can be given incentives through stock options, not available to cooperatives.
- Pro-Fac growers are able to expand production because of the broad product line capabilities of Curtis-Burns.

The major disadvantages of this joint venture are:

- It severely limits the processor's raw materials supply options and the cooperative's market outlet.
- If the venture is successful it may become the price leader for the raw product and leave an insufficient price mechanism to

determine an equitable transfer price from the company to the cooperative.

Florida Orange Marketers—Minute Maid.—In 1969 an agreement was reached between Florida Orange Marketers (FOM), a producer cooperative, and the Coca-Cola Company's Food Division, of which Minute Maid is a part, in an attempt to establish a fair transfer price for oranges. The agreement provides that the income to the co-op member and to the company will be based on the FOB prices of primary and by-products at the time of shipment from Minute Maid. The company procures approximately one-third of its orange supply from FOM. Because of brand image and quality control, Minute Maid orange juice has enjoyed a price premium in the market place. Despite higher advertising and marketing costs than private label packers, much of the price premium is passed back to the producer. Historically, FOM growers have realized five to seven cents per pound of orange solids above the industry average. The company's share of the FOB price is limited to an amount covering its processing, marketing, and R&D costs connected with the utilization of the oranges. FOM maintains some control over the final utilization of the oranges, and Minute Maid has the authorization to limit the quality and amount of oranges they will accept from FOM.

The advantages in this kind of joint venture are:

- The company is assured a steady supply and the co-op is guaranteed a market, like many joint ventures of this type.
- Since the cooperative shares in the end-product profitability, the producer benefits from the company's research and its advertising and promotion skills.

The disadvantages in this kind of joint venture are:

- The producer assumes all risk of fluctuations in FOB prices since the processor is guaranteed a processing and marketing margin.
- Growers are more directly affected by the growing labor turmoil in agriculture. By joining forces with a major brand company, which is vulnerable to a national boycott, growers may be adversely affected.
- Growers may have to find other markets for some of their production since Minute Maid negotiates for fixed volumes of oranges.

Heublein—United Vintners.—Allied Grape Growers, a California cooperative with about 1600 members, acquired United Vintners (UV) in 1959. UV provided the processing and marketing skills needed by the growers to market their grapes effectively.

After the merger the wine industry underwent changes, including the development of new products and mechanization of grape harvesting and processing. Thus growers experienced a need for expanded capital reserves to finance mechanized vineyard production and, in addition, to finance new processing equipment and marketing programs associated with their processing cooperative.

To expand and compete more effectively, Allied Grape Growers began to seek sources of capital other than that provided by its members' revolving fund. Heublein was interested in getting into the domestic wine business and made Allied an offer for UV. Allied's board indi-

cated no interest in a sale, but was receptive to a joint venture with Heublein. As a result Heublein acquired an 82 percent interest in UV, and Allied retained an 18 percent interest.

The key element of the deal, assuring producers of a market and Heublein of a source of supply, was a pre-merger contract drawn up between Allied Grape Growers and United Vintners. The twenty-year, renewable agreement called for Allied to be the exclusive supplier of domestic grapes for UV at the quoted average market price plus a premium equal to twenty percent of UV pretax profits.

Over time this venture has not performed to the satisfaction of both parties, and its status is in current litigation. Because of the unresolved issues concerning this venture it is not feasible to speculate in this paper on the causes of the unsatisfactory performance. For whatever reason, since the venture began UV has not realized a profit. Thus, the illustration that joint ventures are not automatically successful.

The advantages in this kind of joint venture are:

- The marketing firm enters a new business which is complementary to its existing product line and marketing skills.
- The cooperative gains access to needed capital, to broader market distribution, and to an established brand franchise.

The disadvantages in this kind of joint venture are:

- Unequal equity interests by the two participants can lead to little or no management control by the party with the minor interest.
- Since the contract calls for the minority interest party to be paid a premium based on the venture's profits, the determination of those profits could lead to one party or the other or both being dissatisfied with the transfer price.

Conditions Necessary for Joint-Venture Success

Joint ventures, like any other business enterprise, are not automatically successful. While all factors contributing to a successful venture probably cannot be identified, a number of important ones are outlined in this section.

Equitable Agreement.—Perhaps the most important aspect of a joint venture is the original agreement between the cooperative parties. Extreme care must be taken to safeguard against unfair dominance by one firm or the other. Specifically the agreement should assure the following:

(*a*) Terms of ownership. Each party should have clearly specified claims to the venture's equity and capital assets.

(*b*) Management control. Voting rights of both partners should be specified. In general, the closer the voting proportions are to being equal, the more likely the chance for success.

(*c*) Supply and market contracts. The producing cooperative must assure a certain level and quality of raw products while the marketing firm must agree to market the output from the venture. It may be desirable to allow the venture to secure supplies from growers outside of the participating cooperative during certain periods to maintain an efficient operation and to assure continuous market supplies.

(*d*) Equitable pricing formulas. Growers should have a clear understanding of the transfer price determination. If the price includes a premium based on the profit performance of the venture, the agreement should specify how profits are to be measured, and growers should maintain sufficient management control of the venture operation to assure pursuit of the profit objective.

(*e*) Unusual changes in the economic or agronomic environment may lead to adjustments in the joint venture. Machinery should be established for making these changes as a joint-venture is a dynamic and changing relationship.

Operation and Management.—The venture enterprise must be expertly managed. It is quite likely that both participating firms may need to look outside their respective organizations for management personnel. The operation must be large enough to operate efficiently. It must serve an industry need; that is, it should either provide an existing service more efficiently or provide a new service.

Adequate Capital.—Joint ventures sometime require additional capital for acquiring facilities, management, and the raw product. This should not be too difficult because the partners in the venture can exploit each other's financial resources. The company can make use of the Bank for Cooperatives, and the cooperative has access to the company's many sources of funds.

Market Access.—A market must be found, maintained, or expanded for the products of the venture. Emphasis for the cooperative partner must be on delivering a commodity to the corporate partner that meets the needs of the market.

Social and Political Environment.—Public attitudes toward joint ventures between producer cooperatives and non-cooperative firms are important factors in determining whether or not this type of structure will develop and persist. An important aspect is the ability of the cooperative to remain a cooperative and not be jeopardized by the venture agreement. Governmental action, reflecting public opinion, must be favorable if such ventures are to succeed.

Potential Impact on Joint-Venture Participants

Expected economic, financial, control, and management implications resulting from a joint venture depend, to a critical extent, on the particular characteristics of the involved firms, the economic environment within which they operate, and the nature of the joint venture. This section considers likely effects on the producer cooperatives and non-cooperative firms actually involved in the venture.

Management Innovations.—Joint ventures almost certainly result in management revisions for the involved participants. The project may result in a consolidation and/or transfer of certain marketing, transportation, and processing function. This in turn might facilitate coordination of the production and marketing functions resulting in tighter management control. It may also mean a loss of some management freedom of choice on the part of one or all partners with respect to choice of market, source of supply, and/or timing and quality of production. A trade-off may develop between better coordination and cost control and the loss of freedom to choose the most advantageous market or supply source.

Both firms will have to learn to make joint management decisions with respect to the operation of the venture. Quite often conflicts may develop because of the differing goals of the participating firms. The ability to overcome these conflicts should result in positive benefits to both growers and agribusiness.

In general, one would expect the necessary management innovations for a successful venture to have beneficial impact on all participants.

Monetary Impacts.—The joint project may have a financial impact to the cooperating partners. Cost efficiencies would likely result from better coordination of the supply, processing, and marketing functions. Finally, costs may be lowered because of reduced uncertainty with respect to supply procurement and market outlet.

Joint ventures may also alter normal pricing mechanisms. Products which previously passed through an open market may now become essentially an intermediate (output) input. The price attributed to this intermediate product may be based on the value of final output less processing charges; a specified formula based on quality, volume, and final use characteristics; or an "arm's length" competitive price. Thus the venture may result in pricing efficiencies or pricing inefficiencies, depending on the unique aspects of the venture agreement.

Another financial factor involved in joint venture decisions relates to credit and cash flow alternatives. Depending on the venture agreements, the non-cooperative participant may gain access to the cooperative's credit sources and to some or all of the cooperative's non-equity surplus. Cash flow may be faster because of the standard cooperative law requiring producers to pay a single tax on earnings. Access to the non-cooperative's capital reserve and credit sources may allow cooperative grower members more capital to devote to production activities.

Sharing of Risk.—All parties to a joint venture will probably realize some changes in the risks they usually bear. Producers, through the cooperative, may become insulated from the usual short-term fluctuations in farm-level prices. Grower prices, based on the actual sales value of the final processed product less processing and storage charges, will normally be less variable than farm-gate cash-sales prices. Thus, the timing of producer sales become less critical. However, by having his price based on processed product values, the producer assumes all risks of price changes at the wholesale level; or, depending on the nature of the venture, at the retail or consumer level. Since prices tend to be less variable as the pricing points move closer to the consumer level, the net effect to producers should be a decrease in the risks associated with price variability.

The non-cooperative partner should realize a decreased risk cost. Some of the price variability risk associated with open-market supply procurement will be eliminated and some will be passed back to producers. The joint venture with a producer cooperative will also decrease some of the uncertainty problems associated with undependable raw product supplies.

Product and Market Enhancement.—The venture may result in a successful product innovation. This may take the form of quality improvement, packaging and processing changes, some degree of brand differentiation, and/or supply stability. The net effect would be an increased consumer demand for the products produced by the joint

venture participants in which case all participants to the joint venture would realize benefits from the expanded demand.

Some negative effects are possible. Should the joint venture result in a national-label brand-franchise, growers may suddenly find they are producing a product easily identified by consumers. While this has positive aspects, it could also make the producers more vulnerable to sudden changes in consumer preferences. Examples include boycotts, health scares, and labor disputes.

Market Structure and Performance.—As with integration through ownership, joint ventures might decrease or increase competition within an industry. The joint venture might represent the only feasible way of entering a segment of the subsector dominated by a few large firms. On the other hand, the venture itself may be large enough to be a dominating force. In the latter case, entry possibility by competing firms may be decreased, hence less competition.

For most of agriculture it would appear that joint ventures would lead to more equalization of market power between producer groups and large marketing firms. This in turn should result in negotiated sales terms which are more equitable to both producers and consumers than when the market power is concentrated at one level in the market channel.

Potential Impact on Non-Participants

The economic effects of a joint venture external to the immediately involved partners must also be considered when determining the worth of the structural arrangement to society. Unlike the traditional family farm, which can act pretty much in its own self-interest with little noticeable effect on society, actions taken by large producer cooperatives and large agribusiness corporations do have a ripple effect throughout the economy. The results may have implications with respect to pricing efficiency, accessibility to markets, informational flows, volume and quality of consumer goods produced, freedom of producer and consumer choice, and governmental regulation.

Non-participants Within the Industry.—Consider first the possible effects on competing growers, processors, and distributors. The net external effects to this sector are dependent upon the ultimate result of the joint venture. For example, assume that the venture results in a demand-enhancing product innovation. If the venture expands its market via a branded product, competing firms may experience a decreased market share and more difficult conditions of entry. On the other hand, the product innovation may be diffused rapidly throughout the industry with an overall market gain.

Ventures that result in cost efficiencies will give the participating firms an economic advantage over competing firms. Depending on the relative market share of participating and non-participating firms, outside firms could find themselves at a disadvantage serious enough to either force them out of business or into an integrated or joint-venture structure.

As with ownership integration, joint ventures which control a dominant market share may result in the loss of market information at one or more pricing points within the marketing system.[5] Thus producers

[5] "Mandatory Public Reporting of Market Transactions" in this series discusses this problem.

and marketers outside the venture may have difficulty determining equitable transfer prices. An opposite effect could occur when the venture resulted in increased competition within the industry.

Consumers.—The consumer could benefit from joint ventures in several ways. Improved coordination of supply, processing, and marketing activities will result in cost efficiencies, some of which will be passed on to the consumer in the form of either lower prices or a wider choice of product or both. Many times an integrated firm may be able to respond more quickly to changes in consumer preferences than the open market system because of better communication between marketing and producing entities.

Negative results for the consumer could occur if the joint venture results in a concentration of market power to the extent that economic gains are not passed forward and the market mechanism is no longer able to adequately reflect changes in consumer wants and needs.

Government.—Joint ventures could result in a loss of public information as more open market functions become internalized. This loss, in turn, may result in higher governmental costs of regulation.

Positive benefits could accrue from the improved coordination within the system or increased competition. This may result in less need for agricultural commodity programs at the federal level.

Implementation

The exact procedure for implementation of a joint venture is, of course, unique to the particular circumstances. In this paper we can only suggest some very general guidelines.

For producer cooperatives who want to become a part of an integrated system via a joint venture, the primary requisite is to find a partner. To do that the cooperative must have something to offer the partner in the venture and vice-versa. For example in the FOM-Minute Maid example, FOM had the quantity and quality of oranges required by Minute Maid and Minute Maid offered FOM a needed market outlet with the added benefits of an established brand franchise. In the Heublein-United Vintner example, United Vintner had a processing-marketing system and Heublein offered a larger market and adequate capital.

To be in a position to offer a potential partner something unique, as the previous examples indicate, usually requires investment by the cooperative. Farmer-members must be willing to invest in processing facilities, patents, or quality control programs that signal to a potential partner further up the marketing channel the cooperative has something to offer which complements their operation.

Prior to a joint venture agreement, the management of both partners should explore the areas of possible conflict between the firms. They should also develop a clear statement, understood by all partners, of the marketing objective to be fulfilled by the venture. Those two implementation steps are essential to the minimization of serious conflict of interest after the venture becomes operational.

Implementation also involves decisions regarding location of facilities, size of operation, and capital needs. Outside consultation services may be required to assist in these decisions.

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MARKETING ORDERS

(By Walter J. Armbruster,[1] Truman F. Graf,[2] and Alden C. Manchester[3])

Introduction

In the 1930's the seasonal and annual price swings associated with the quantity variability of agricultural products were compounded by weak farmer bargaining power. This resulted in wildly fluctuating farm prices over long periods of time, and production cycles in which excesses were followed by deficit supplies. The uncertainty about whether prices would be above or below costs of production was unacceptable, thus federal and state marketing-order programs were initiated in an attempt to bring orderly conditions to chaotic markets. Since their inception the programs—used for milk, fruits, vegetables, and specialty crops—have met a stated need, but changes in the marketing system and economic situation have resulted in recent pressures to re-evaluate the purposes of or even eliminate marketing order programs.

Marketing orders provide a mechanism by which producers may initiate programs to regulate marketing of their commodities through unified action. Orders can be requested by farmers on a federal or state level, and can be implemented by a vote of those affected. The regulated crop, production area, or specified utilization is defined in the market order, and the regulations are obligatory on all sales of the covered commodity. Use of a marketing order to institute regulations makes all producers who benefit from the program share the burden of activities used to achieve the gains. The Secretary of Agriculture administers the orders and usually on the advice of a Board of farmers. The costs of administering the programs are collected on a per-unit basis from handlers and farmers, with no tax funds involved.

Marketing orders are often referred to as farmer self help programs. The intent is to provide a means whereby farmers can exercise some degree of control of the quality and quantity that goes to market so that their incomes will be more stable and the quantity and quality going to consumers would be more stable and uniform.

Federal orders for milk set minimum prices, while those for fruits, vegetables and specialty crops affect price through quantity and quality regulations. The administration of federal milk orders is carried out through operating rules that cause changes in prices when certain conditions are met. Fruit and vegetable orders are administered by establishing periodic levels of regulation based on recommendations made by market order committees comprised of industry mem-

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bers. Provisions of state market orders vary among states more than do provisions of federal orders in the different states.

Minimum Price-Setting for Milk.—Federal milk-marketing orders set minimum prices for raw fluid grade milk which must be paid by processors to dairy farmers (usually through farmer cooperatives). State orders set minimum farm, wholesale, and retail prices, depending on the state involved. Most fluid grade milk produced for fluid use is priced under state or federal orders; prices for manufacturing grade milk, produced specifically for butter, cheese or powder production, are determined in an open market environment.

Minimum prices according to product use are established for federal and state marketing orders on the basis of specified relationships to the Minnesota-Wisconsin manufacturing grade milk price.[4] With a few minor exceptions, prices for all milk including fluid grade milk that is used in manufactured dairy products are at or near the Minnesota-Wisconsin price base, while prices for milk for fluid use, usually specified as Class I, are higher by fixed differentials. The differential partially reflects differences in costs of more expensive production facilities required to meet the sanitary regulations for Grade A milk, and differences in marketing and transportation costs.

Since 1958, farmer cooperatives have negotiated "super pool" premiums over minimum order prices in many federal market order areas. These premiums are intended to cover production costs that may be above the minimum price set by the market order.

Regulations for Fruit and Vegetables.—Federal market-order programs for fruits and vegetables are designed to deal with product variability and to fit fluctuating supplies to market demand. They rely primarily on quality control, market flow, and volume management to enhance the level and stability of producer returns.[5] These provisions regulate supply variables to take advantage of markets differing in quality requirements, the form in which a product is to be used, the timing of demand, and location.

Quality control regulations specify minimum grades and sizes marketable. By improving the degree of uniformity and reliability in general quality, prices increase, and the price of higher quality products is kept above what might otherwise occur. Market flow regulations, primarily used in citrus marketing programs, limit fresh market shipments in periods of greatest product availability in an attempt to prevent low prices and product waste. Volume management regulations restrict supplies of storable dried fruits and nuts going into primary markets—usually the fresh or domestic markets—either through reserve pools, producer market allotments or diversion of excess supplies to alternative outlets, such as export or nonfood use. Several supplementary provisions are widely used to improve physical characteristics, the image of the commodity, and its marketing system, thereby reducing costs or increasing returns. These provisions specify standard packs and containers, fund research and development activi-

[4] This is the average price paid for manufacturing grade milk by a specified number (sample) of plants that buy milk directly from farmers as reported by the agency of the U.S. Department of Agriculture.

[5] Twenty-two of the 48 existing market order and agreement programs for fruits, vegetables, nuts, and specialty crops contain provisions for direct regulation of quantities marketed. Most quantity regulation orders also contain provisions for grade and size regulation, however 26 orders allow only grade and size regulation.

ties, and provide a funding mechanism for commodity advertising and promotion.

Possible Future Uses of Market Orders

Marketing orders provide a means through which farmers can gain better access to markets and improve market performance and pricing efficiency. While milk price-setting and quantity and quality regulation for fruits and vegetables are the principal current uses of marketing orders, they could be extended to cover additional commodities of the same types now covered, or to cover commodities not now covered, such as livestock, grain, and fish. Or provisions authorized under the orders could be applied to commodities or situations where they are not now being used. The classified pricing system used for milk could be used for fruits, vegetables, and meat, with fresh products priced at levels different from processed. Or the marketing order could be extended to provide funds for new tools such as the development and operation of a centralized remote access market. A discussion of some of the more important possibilities follows.

Expand National or Regional Coverage.—Marketing orders could be established to obtain more national or regional market coverage. Orders encompassing the entire commercial production area for fruits and vegetables, whether in one state or several, appear to be the most successful because they eliminate the possible problem of competing production areas expanding production in response to temporary price gains achieved under an order. A major problem facing federal milk orders is uneven Class I utilization between markets, coupled with rapid conversion of manufacturing grade milk to Grade A and its association with federal order pools causing geographic disparities in farm milk prices. Although the present pricing and pooling system for milk has kept blend prices in reasonable alignment relative to transfer costs, significant modifications will be needed in the future. If new ways are not devised so that newly converted Grade A milk can share in fluid outlets in an orderly way, disorderly marketing conditions will be created all over the United States. We now have over fifty federal milk orders. No more than ten, and possibly as few as five, would possibly best serve the needs of the industry and the purposes of the public.

Extent to Cover Processing Commodities.—Through the political strength of processors most processing fruits and vegetables are now exempt from market order coverage. When one use of a commodity is regulated and others are not, the nonregulated portion often interferes with the orderly marketing of the regulated portion. Futhermore the exemption results in an unequal availability of marketing options among groups of producers. Elimination of the exemption now written into the legislation would make it possible for all producers of all commodities to enjoy similar benefits and facilitate the orderly marketing of more products.

More Funds for Promotion and Advertising.—Producer "check-offs" for promotion and advertising are being made in approximately one-half of the federal and state milk orders, and one-fifth of the fruit and vegetable orders. These check-offs provide a mechanism for funding industry-wide generic advertising. The current market order legislation limits authority to cover only selected commodities. Thus some

commodities, such as potatoes and eggs have recently obtained special legislation not connected with the orders to authorize industry wide check-offs. It would be more efficient if all commodities had the same enabling legislation to establish procedures for requesting and voting for advertising or promotion programs.

Most advertising programs are not evaluated. It is difficult and can be costly. Some studies of milk advertising have indicated positive returns to producers above the cost of the program. Although a number of fruit and vegetable generic advertising programs exist, little analysis of their effects has been accomplished. Without analysis farmers do not know whether their programs are beneficial or not.

Promotion and advertising are recognized marketing tools that could be important options for agricultural producers, but, there is a critical need to determine both the applicability and benefits of these tools for basic agricultural products. However, where such programs are in operation, every effort should be made to make sure that the dollars collected are being properly and effectively spent so as to provide farmers a proper return.

Support of Electronic Exchange Systems.[6]—Marketing order legislation could be expanded to authorize and support the operation of exchange mechanisms. Funds could be collected under the order to provide capital and operating funds for the establishment of centralized remote access market arrangements. Electronic remote access exchanges increase market access, and speed the flow of price information thus increasing the price knowledge of farmers. Marketing orders could also be used to require that all or a portion of a commodity be traded across an electronic exchange. This would increase the exposure of sellers to buyers and buyers to sellers.

Data Gathering and Reporting Market Transactions.[7]—Because many commodities are marketed under contract arrangements for which prices are not reported it is increasingly difficult to determine market prices. Even when commodities are marketed through direct channels, prices derived from a relatively small number of sales at some central market are not representative nor do they necessarily reflect market conditions. A marketing order progam could require reporting of prices and related information on all transactions, whether contracted or open market sales. This information could be made public without disclosing source. This could provide a more efficient marketing system, allow producers to make better informed price decisions, and provide reported prices which could be used in formula pricing.

To Strengthen Bargaining Associations and Marketing Cooperatives.—Many bargaining associations or marketing cooperatives now bear the cost of market regulation programs for the whole industry, including "free riders." Market order regulations can help spread the burden to all industry participants who benefit from the programs. For example, milk marketing cooperatives now perform a number of services which include delivery scheduling of desired quantities to individual fluid milk processors, and to the market as a whole, and the balancing of supplies to fluid and manufacturing outlets. Service charges incorporated into the minimum prices for milk paid by processors would remove some of the advantages now held by nonmembers or

[6] See Henderson, Schrader and Turner, "Centralized Remote-Access Markets."
[7] See Padberg and Moulton, "Mandatory Public Reporting of Market Transactions."

smaller cooperatives who do not participate in the costs of programs from which they receive benefits.

Over-order payments have come under increasing attack in recent years as evidence of the monopoly power of cooperatives. By incorporating those parts of over-order payments which are charges for marketing services rendered into federal order prices, the economic and legal basis for them could be established. Marketing order legislation could be expanded to strengthen cooperatives and remove the "free rider" problem.

To Include Production Allotment Programs.—Producer market allotment programs are authorized for three commodities: hops, Florida celery, and cranberries. Production allotment programs are not authorized for any commodity. Market allotment programs can influence production through the allocation of markets. But farmers can still produce beyond the needs of the market. If supplies are to be truly tailored to market needs, independent of market price, production needs to be controlled or regulated. The authorization of production control or allotments would require major legislation changes in the order legislation.

Expand Quality Upgrading.—Almost all fruit and vegetable marketing orders currently contain provisions for minimum grade, size, and/or maturity regulations for fresh marketings. Similar provisions could be established for other commodities. Quality regulation emphasizes quality improvement to increase consumer demand for a commodity. Sales of lower quality or smaller sizes, sold in competition with larger sizes or better quality, can lower the price for an entire crop.

Specify Uniform Packaging.—A widely used provision of market order programs specifies uniform packing and container regulations. The major purpose of this regulation is to prevent deceptive practices involving shipping containers, and to encourage uniformity in packages used for shipping commodities to market. This provides efficiencies in handling at all levels of the marketing channel. This provision could improve efficiencies in food marketing even more if used or was authorized to be used for more commodities.

Standards for packing within containers are provided in legislation. Such regulations specify how many of a certain kind or size of commodity are to be packed in containers labeled in various manners. Pack regulation is especially important for commercial food service establishments desiring to control portions. Growers gain by consistently providing a fairly uniform pack so buyers get the size range desired and the expected number in each package. More emphasis on uniform packaging provisions in market orders would be beneficial.

Conditions for Implementation

Marketing orders need to be tailored to particular situations. Producers desiring to use marketing orders in the ways considered above need to carefully analyze the potential impacts and desirable features for their economic situation. Obviously, not all of the above possibilities fit all commodities, and, for some commodities, marketing orders in the present form and in the proposed uses would not work.

Marketing orders as traditionally used provide a mandatory approach to coordinating the production-marketing sequence in those

commodities where conditions exist favorable to organizing and identifying a set of mutually agreeable objectives. Implementation of successful marketing-order programs require: (1) A well-defined production area which is geographically concentrated so that at least the majority of production falls under the same economic conditions, and so that production in one area will not be increased to offset gains achieved in another area; (2) different uses for the commodity and different price reactions to changes in quantities marketed, so that regulating quantity between uses may result in greater total revenue; (3) progressive, competent leadership capable of coordinating production-marketing activities to meet the goals of the producers; (4) different seasonal demands having different price-quantity responses which allow income increases through rate of flow regulation; and (5) funneling commodities through few outlets to provide easier control over the marketing system.

Potential Impacts

Hard questions must be dealt with in attempting to bolster farmer profits under marketing order programs:

What are the potentials and limitations of the various programs for different commodities and economic situations?

What are the costs and benefits obtainable by farmers, handlers, and consumers?

Each situation will require careful analysis by individuals thoroughly familiar with the industry.

With changes that have occurred in food costs, the economic-social-political climate in which United States agriculture now operates differs markedly from a few years ago. Legislators, economists, regulatory agencies, and the consuming public question the impact of farm programs and the distribution of gains among large and small producers; consumers have become better organized to challenge rising retail food costs; and public interests question the consistency, adequacy, and public costs of agricultural programs. It is in this setting that evaluation of the usefulness of expanding market order programs must be undertaken. Marketing order programs which have as their goal substantial limitation of supply or substantial price enhancement for the benefit of farmers at the clear expense of consumers are not likely to be acceptable.

The implications for farmers and their use of the programs discussed indicate emphasis should be put on programs to expand markets, domestic and foreign; programs to increase efficiency in marketing; and programs which permit farmers to capture profits in the marketing system or attain better prices from handlers through improved production marketing practices, without substantial enhancement of prices at retail. Most of the suggested uses of marketing orders described in this paper could fall into these categories.

How to Achieve Expanded Marketing-Order Programs

The expansion of marketing order provisions into areas or to cover commodities for which the enabling legislation already exists requires an organized effort by a group of farmers or farm leaders to develop

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rules acceptable and advantageous to a sizeable majority of all producers that would be affected. Further legislation would be necessary to permit expanded use of the order provisions to cover commodities not currently authorized to use federal marketing orders. New or amended legislation would also be required to permit the marketing order approach to be used to support exchange mechanisms, expand promotion efforts, support specific data gathering and market information systems.

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MARKETING BOARDS

(By Martin E. Abel [1] and Michele M. Veeman [2])

Introduction

The institutions known as "marketing boards" are one of many types of possible agricultural marketing policy instruments, and are long-established institutions in Australia, New Zealand, Canada, and the United Kingdom. In these and a large number of other countries, a legislative framework, experience, and familiarity with the wide number of uses of this type of policy instrument have gradually evolved. Marketing boards are not, however, the only instrument of agricultural marketing policy in these countries, nor are they a complete replacement for government controls or interventions.

Marketing boards perform a number of functions which are carried out by farm and commodity organizations, bargaining groups, and by government agencies in the United States. Although the system of government under which they have evolved differs from ours, the problems they were designed to solve are common; thus this instrument of agricultural marketing policy holds some lessons for us.

The definition of a marketing board tends to vary from country to country. In some countries, public or quasi-governmental bodies, which consist entirely or largely of government representatives, are considered to be marketing boards, whereas in other countries these would be considered government agencies and the term "marketing board" reserved purely for producer-controlled bodies. Despite differences such as these, one common feature of all marketing boards is that they are compulsory bodies, set up under government legislation to perform specific marketing functions. In view of the time and space limitations, this paper will focus primarily on producer marketing boards.

A producer marketing board may be described as a horizontal, producer-oriented organization established under government legislation which gives the board various legal powers of compulsion over producers and, in some instances, over manufacturers and handlers of primary or processed agricultural commodities, and which operate in the interest of agricultural producers. The degree of compulsion over producers and others in the marketing chain, the type and extent of marketing functions undertaken by a board, and the extent of autonomy that a board has in carrying out its functions vary greatly between different commodities and different countries. This description of a producer marketing board as a "producer oriented"

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rather than as a "producer controlled" organization encompasses bodies such as the Canadian Wheat Board which is, strictly speaking, a crown (or government) corporation which operates under the direction of government appointed commissioners, though with the guidance of an advisory committee of elected producer representatives. This description also includes as boards, bodies known as marketing commissions. A more restrictive definition of a producer marketing board as a "producer controlled" or "producer elected" body would exclude such boards, even though they function independent of government financing and in the direct interests of producers.

Establishment and Use of Marketing Boards

Why Boards are Established.—Marketing boards have generally tended to be established following periods of depressed and uncertain agricultural prices which in turn have been associated with producer discontent with the structure and functioning of the agricultural marketing system and suspicion of existing marketing intermediaries. The earliest boards were established in Queensland, Australia, and in New Zealand in the early 1920's following producer discontent with the declining prices that followed World War I. These, as well as some later boards, were established after unsuccessful producer efforts to seek "market power" or "orderly marketing" through the establishment and use of producer cooperatives. Depressed economic conditions in the 1930's also provided an impetus for more widespread pressure for agricultural marketing boards by producers. The experience of relatively more favorable and stable agricultural prices in many British Commonwealth countries under government-to-government export sales and controlled domestic marketing during World War II was also a factor leading many producers to accept or advocate continued use of more centralized marketing mechanisms during the late 1940's.

In short, the primary objective of most agricultural marketing boards is to improve the price and income situation of agricultural producers. For many boards, this is the sole objective of their operations; however, some marketing boards have the secondary objectives of reducing variability in agricultural prices and, in some cases, of producing a degree of equity of market opportunities between different producers.

How Boards are Established.—Marketing boards may be established for some commodities through specific legislation that provides for the establishment and specifies the membership, functions, and powers of that particular board. Alternatively, in most countries, general enabling legislation has been passed which provides for procedures under which specific marketing boards may be established. In most instances, producers' approval is required and is determined by a vote or referendum before the establishment of a particular marketing plan or marketing board. The membership of most marketing boards is determined by producer vote, though the legislative provisions under which a number of boards are established provides for government appointment of members rather than their direct determination by producer vote. Some boards' legislation provides for government appointment of certain members who are charged with the representa-

tive of public or consumer, rather than producer, interests. The legislative provisions applying to some boards (as for example in Australia and the United Kingdom) have in some instances provided for representation of manufacturer or handler interests.

Major Functions of Marketing Boards.—There is great diversity in the number and type of functions performed by different marketing boards and, therefore, in the type and extent of the powers possessed by different boards. In this section of the paper, various functions which different boards perform are briefly surveyed. Most boards perform some combination of the following functions though few, if any, boards perform all these functions.

1. Collection and dissemination of market information is an activity performed by many marketing boards, generally in combination with one or more other functions.

2. Product promotion of existing forms of the product in existing markets or uses is another fairly common function of marketing boards. With some boards this function is more specialized and is extended further to development and promotion of new forms or uses of the product in new markets.

3. Research and dissemination of information. A number of marketing boards conduct or sponsor research on production and marketing problems that apply to particular commodities. Dissemination of such information to producers via board-sponsored journals or other publications is another activity carried out by many boards. Some boards provide a more formal technical advisory service for producers, manufacturers or handlers on the adoption and maintenance of innovations with cost-reducing and efficiency-improving effects.

4. The establishment and implementation of grading standards has been a function carried out by a number of boards. The encouragement of quality control through the establishment of grading systems has been an important function of some export control boards.

5. Operation or supervision of selling facilities. In circumstances where market institutions or sales facilities have been considered inadequate for effective price discovery, some marketing boards have been charged with the supervision or even the operation of the selling mechanism. An example is provided by various provincial hog marketing boards in Canada which, by operating teletype auction systems through which all slaughter hogs must be sold, attempt to maintain a degree of competition between purchasers.[3]

6. Collective bargaining and price negotiation. When it is determined that there is a disadvantage to producers in facing a more concentrated purchasing sector, a number of marketing boards negotiate the conditions of sale and prices for produce on behalf of all their producers. This is a common function of fruit and vegetable marketing boards. In some instances, the bargaining power of such boards will be reinforced by the possibility of diverting produce to secondary markets or secondary uses or by powers to apply production or marketing quotas; however, these powers are not available to all negotiating boards. A similar collective bargaining function is carried out by other boards with respect to producers' purchases of input supplies

[3] For a discussion of exchange mechanism see the "Centralized Remote-Access Markets" paper in this series.

or services. Examples here are provided by a number of export control boards which have, as one of their functions, the negotiation of terms of carriage and freight rates with shipping companies.

7. Purchase, storage and sale of product. All boards are not empowered to trade in the commodity they are concerned with. Some boards have no trading powers at all, some are empowered to trade only in particular circumstances or special markets; however, a number of boards are required to act as the sole purchaser from producers and to sell on their behalf. Whether export or domestic trading boards, these bodies generally have a wide number of sub-functions and extensive powers.

In pursuit of the general objective of reducing price fluctuations, some boards are empowered to operate buffer stock type operations (purchase, storage and sale programs designed to even out price fluctuations even though full trading activities may not be undertaken). The New Zealand Wool Marketing Corporation is a marketing board which pools sale proceeds (a different pool applying for every different grade) from sales of wool every season—a procedure which minimizes fluctuations in producers' prices within that season and equalizes market opportunities between different producers. This procedure is common with export trading boards.

In pursuit of the general objective of increasing producer prices and returns, some trading boards are able to follow a trading and pricing strategy or price discrimination between markets which have different demand characteristics. The Canadian egg marketing board influences the returns to egg producers through price discrimination between fresh and breaker egg markets. Dairy boards might influence returns through price discrimination between fluid milk and processing milk markets—an activity facilitated by the fluid milk quotas applied by all but one of the provincial milk marketing boards in Canada.

In pursuit of the same objective, some board are empowered to limit marketings by applying production or marketing quotas. This activity recognizes the inelasticity of market demand that prevails for most agricultural products and is designed to increase total revenue to quota-holding producers. This type of board sometimes has the power to directly determine prices to be paid to producers by manufacturers or handlers—it may set prices by means of a formula or by means of some measure of cost of production. This is not a function performed by all boards. It is generally restricted to some domestic trading boards.

The first five operations listed above are basically "facilitating functions" which may, to the extent that they lead to decreased costs or decreased marketing margins, have beneficial effects for consumers as well as producers. More controversy is involved with functions involving price discrimination and production or marketing quotas. The exertion of market power by boards in this manner has been particularly subject to adverse comment by consumers in inflationary periods. The issues of distortion of efficiency in resource allocation, capitalization of quota benefits into quota values and consequent cost structure increases for farm firms, and restriction of entry to new producers into quota-controlled industries are side effects of these types of programs, whether carried out by marketing boards or by other institutions.

Types of Marketing Boards.—Promotion and advisory boards. An example of this type of board is the New Zealand Wool Board. This body largely consists of elected woolgrower representatives; an appointed government representative is also a member. This board's activities are partial funding of the International Wool Secretariat (an international body which conducts market promotion, technical research, and technical advisory services in major wool markets) ; local market promotion; research and provision of technical advisory services to local manufacturers; and provision of a shearer training service. The board has links with other institutions which include its collaboration with the Meat Board in conducting economic surveys of producers and its representation on the directorate of the Wool Marketing Corporation, a national body with trading powers.

Regulatory and facilitating boards. Two somewhat different examples of this type of board are provided by the Australian Meat Board and the Alberta Hog Producers' Marketing Board. The Australian Meat Board is a federal body (as distinct from those Australian boards established under state legislation). While members of the board are appointed, producer representatives predominate, though there is a government representative and two meat exporter representatives. The board's activities are primarily funded by a levy on slaughtered livestock. The board conducts market development and promotion activities domestically and abroad. It has engaged in trading activities (for example, with communist countries), but its major activities lie in regulation of, rather than conduct of, sales. The board controls the export of meat by issuing licenses to exporters and by approving North American importers. Export control by license gives the board control over both the type of product exported as well as its destination. These controls are used in the board's market development strategy and have been used to ensure compliance with U.S. import quotas. The board has operated a market diversification program whereby exporters earned entitlements to export to the higher-priced U.S. market by selling a proportion of their product in other markets. Other major activities of the board include participation on the Australian Shippers' Council, which negotiates freight rates and related issues, and its participation in developing a carcass classification system of grading.

The Alberta Hog Producers' Marketing Board performs somewhat different functions. This board was established under legislation of the Province of Alberta in Canada. Board members are elected producers. The board is funded by a levy on slaughter hogs. Although this board carries out promotional activities and has encouraged the development of export marketing of hogs under contract sales to Japan, its major function is to operate the mechanism of sale of all slaughter hogs produced in the province. This system was instituted because of a pre-board situation where a small number of hogs passing through terminal markets gave an insufficient indication of total supply and demand and yet served as the basis of price determination for the whole industry. The board operates a teletype auction system through which all slaughter hogs must be sold.

Export trading boards. The Australian Wheat Board—a federal board—provides an example of this type of board. Most members of this board are elected producer representatives; there are also three

government appointees, one of whom represents flour mill owners and one represents employees. The board is the statutory authority with the sole right to market wheat in Australia and Australian wheat and flour overseas. The board operates the government's wheat industry stabilization plan which involves administration of the government's guaranteed price for wheat for a specified quantity of exports and local sale of wheat at prices determined on the basis of a measure of cost of production. When export prices exceed the guaranteed price, a portion of the excess is paid into a stabilization fund which is drawn on when export prices are less than the guaranteed price. The board controls the handling, storage, and shipment of wheat; it pools producer payments on an annual basis, and it engages in promotional activities and has entered into long-term sales agreements with a number of importing countries.

Domestic trading board. A large number of examples of this type of board are available. Fluid milk and poultry boards are often of this type. These boards typically engage in promotion and sponsor research, but their major activity tends to be as the sole purchaser and seller of the commodity concerned. They may be empowered to set production or marketing quotas. Problems of quota use were briefly described in the preceding section.

Implications of Marketing Boards for the United States

While marketing boards have not been an element in marketing U.S. agricultural products, they do represent a marketing option. We will discuss in some detail the role of only one type of marketing board, an export marketing board for grains, to illustrate the role such an institution might play. Similar considerations would be involved in the establishment and operation of export marketing boards for other products. As a simplification, the theoretical export marketing board would have sole control over U.S. grain exports only; domestic trade in grain would continue to be carried out by private firms and cooperatives. Considerable interest has been expressed in the establishment of such an organization in recent years.

A grain export marketing board could be either exclusively a government agency or basically a producer organization. In the case of the former type of organization, a government agency would have responsibility for export sales and producers or other groups would not have a direct input into the management of the board. In the case of producer boards, producers would play a major role in the operations of the board. There may also be representation on the board of government, consumer, and possibly domestic food and feed grain marketing and processing interests. Our discussion will focus on the producer-type export marketing board.

The primary responsibility of the board would be its exclusive authority for making all U.S. grain export sales. In addition, the board might be a vehicle for implementation of certain government price, income, and foreign food aid policies. The government might want the board to implement price support programs for grains when they are applicable, to carry reserve stocks, and to be the organization through which foreign food aid exports of grains are handled.

It would be important for the board to distinguish in its operations those functions that it performs for producer members, such as com-

mercial exports sales, and those that it performs for government, such as price support activities and maintenance and management of reserve stocks. Such a distinction among different functions would permit proper evaluation of the board's operations from the standpoint of producer and public interests. Better coordination between the board's and government's activities could result in better planning of export sales. Also, information concerning sales could be made available to the domestic market sooner than under the present system thereby reducing the opportunity for a few private firms to reap profits at the expense of producers and consumers under certain market conditions.

Second, the domestic market for grains would continue to operate basically as it now does with private firms and cooperatives having the responsibility for the marketing and processing of grains. Futures markets for grain would continue to operate serving both domestic interests and those of the board. The performance of futures markets with respect to their role of determining expected demand, supply, and price conditions could be improved if a grain export marketing board were to provide to the market more accurate and more timely information about export sales than occurs under the present system.

Third, the board could utilize cooperatives and private firms in assembling and shipping export grain. It would not have to duplicate existing capabilities for performing these functions. Thus, private and cooperative interests would not be completely excluded from the grain export business, but only from performing the sales functions. Close cooperation between cooperatives and the board might be an indirect way for cooperatives to become more active in the grain export business.

The consequences of a grains export marketing board are numerous. The board would replace private firms and cooperatives in their role of making export sales. In doing so it would have to develop a worldwide market information and sales network to replace the existing private one. This would represent a substantial cost to the marketing board and might take several years to develop a complete and well-trained staff. The potential benefits would have to offset these costs for it to be feasible.

Fourth, producers could be required to make compulsory deliveries to the board in order for it to meet export sales commitments. Most likely, the size of grain delivery commitments to the board would be related to a level of production base established for each firm. Compulsory deliveries to the board might have to take precedent over sales in the domestic market to ensure that the board had adequate supplies of different types and grades of grain to meet export commitments. The board might also buy grain in the open domestic market, but may not want to rely primarily on this source of export grain because of uncertainties about producers' sales behavior and, therefore, market price conditions.

Fifth, and closely related to the possibility of compulsory deliveries, is the requirement that grain export marketing board keep continuously appraised of the domestic supply of different types and grades of grain and their domestic requirements. The board's export sales should be as consistent as possible with both producer and consumer grain price objectives in the United States as well as overall producer returns. The board should conduct its sales program in a way that does not unduly disrupt domestic markets.

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Sixth, the grain export marketing board could pay farmers an average price for each quality of grade of grain for each of the marketing seasons. Producers could receive a partial payment for their grain at the time it was delivered to the board. Subsequent payments would be made to producers after the crop had been marketed and the board's receipts and expenses known. With respect to exports, this system of "price pooling" eliminates seasonal fluctuations in prices, but it also delays the time when farmers know the final price they receive for their products.

Finally, as with any form of public monopoly which a marketing board is, one has to be concerned with accountability to both producers and consumers which the monopoly serves. Producers have to be concerned with whether or not the board is operating efficiently and in their interests. Consumers would be concerned with whether or not the board exercises "excessive" economic power, i.e., whether or not the marketing board is maintaining prices above either free market levels or those that would prevail under current patterns of governmental intervention. Representation of various interest groups on the board, together with close coordination of the board's activities with government agencies responsible for domestic and foreign policies relevant to grains, could ensure "responsible" behavior of the board with respect to both producer and public interests.

Establishment and Successful Operation

The establishment of a grain export marketing board in the United States would require national legislation. This legislation would give the board exclusive authority to handle grain exports. The legislation would also determine representation on the board and provide basic direction as to what the board can or cannot do.

Because a grain export marketing board would represent a significant departure from current practices, Congress would have to be convinced of several things before it is likely to give serious consideration to passing legislation to establish a board: one is widespread producer support for the new institution, another is that the board could adequately reflect producer, consumer, and the nation's domestic and foreign economic interests and would better serve these interests than the present export system.

For the board to be a viable organization it would have to be accepted by producers and the public alike. This means that producers would have to accept such basic principles of operation as compulsory delivery of grain to the board (or, at the least, that the board be the compulsory purchaser and seller for the export market) and price pooling. It also means that the public would view the operations of the board as consistent with broadly accepted domestic and foreign economic policy objectives. Mechanisms would have to be developed to ensure accountability of the board's operations to producers and the public. This will undoubtedly require representation of different groups on the board and that a considerable amount of the grain export marketing board's activities be reported to the public.

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FINE TUNING THE PRESENT SYSTEM

(By Ronald D. Knutson [1], Dale C. Dahl [2], Jack Armstrong [3])

It is frequently suggested that major changes in legislation or structural changes in agriculture are not necessary to improve the competition in agricultural markets. All that is required is that we do a better job of administering and enforcing existing laws and thereby facilitate greater competition and equity in producer markets—whether on the input or output side.

What Is a Fine Tuning Strategy?

Fine tuning implies a multitude of government-facilitating and regulatory strategies that can be pursued through existing legislation to improve the position of farmers in the marketplace and an emphasis on government, administrative and/or producer action to make the markets in which farmers deal more competitive. In essence it is a "ring and valve job" for government programs to assist farmers in marketing their products.

In our concept of fine tuning the farmer faces three major problems:

1. Insufficient competition in the markets where he buys his inputs or sells his products. The root of this problem lies in the relatively high levels of concentration and market power of sellers of inputs and buyers of farm products.

2. Producers are in an inferior negotiating position. This is the result of the concentration and market power facing farmers and the fact that farmers have not exercised market initiatives to gain a relative balance of market power.

3. Producer access to markets is becoming increasingly restricted. Higher levels of concentration and more fully-integrated systems of production and marketing are the primary contributors to problems of producer market access.

This paper explores these problems and suggests they may be remedied by reducing the effects of monopoly in agriculture; by increasing the market power of producers to place them in a balanced negotiating position with that of input supplier and/or food processors and retailers; and by improving the quantity and quality of information at the producers' disposal to make marketing decisions. To a significant extent this can be done within the present legislative authority—if we have the will. It is recognized that to be publicly acceptable, the results of the suggestions made here must be in the interest of consumers as well as producers.

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Fine Tuning To Reduce Effects of Monopoly in Agriculture

Many of the markets from which farmers purchase inputs and into which they sell their production are controlled by a relatively small number of firms. Many are localized thus allowing the farmer few market alternatives. The problem is compounded by large input suppliers or marketing firms dealing in many different local and regional markets. These firms are frequently in a postion to affect the local, regional, as well as national level of input and farm-product prices. Increasingly, powers of these firms are magnified as they integrate into production by either contract or ownership.

Existing regulations, properly enforced and administered, provide numerous opportunities to remedy problems of monopoly in agriculture. These opportunities fall in three major categories: improved enforcement of regulations currently administered by the Secretary of Agriculture; clarification and modification of our antitrust policy with respect to the food industry; and the removal of government-authorized or imposed monopolies.

Agricultural market regulations currently enforced by the Department of Agriculture contain many provisions designed to foster competition. The full competition-enhancing effect of these regulations is not being realized. Provisions relating to fostering competition and preventing monopoly are sometimes ignored completely.

In other cases, enforcement activities of the department are more cosmetic than effective. Rather than being used as a monitoring device or determinant, USDA market regulatory agencies react only after a complaint of abuse. Usually the producer is in no position to complain, either because he fears retaliation or because the effect is of such a general nature that he cannot prove a cause and effect relationship.

Why is this the case? Too often the Department of Agriculture has viewed agricultural input suppliers, marketing firms, processors, and retailers as part of its constituency. This advocacy role conflicts with its regulatory role. The result is that regulation suffers at the expense of advocacy and conflicting clientele interests.

The following specific suggestions are made to fine tune regulations of the Department of Agriculture:

1. In order to protect competition in the food industry an agency should be established with expertise to monitor input, farm, and food prices for evidence of abuses to producer and public interests. Such an agency should devote particular attention to evidence of undue price enhancement by cooperatives in violation of the Capper-Volstead Act, and to evidence of price rigidities which prevent changes in farm-level prices from being reflected in wholesale and/or retail prices. Where evidence of legal abuse is found it should be referred to relevant law enforcement officials in the Department of Justice or the Federal Trade Commission. In other cases, simply focusing public attention on the situation may be sufficient to bring about a more responsive system.

2. The Agricultural Marketing Agreement Act of 1937, as amended, specifically charges the Secretary of Agriculture with protecting the public interest in marketing order and agreement provisions and/or decisions. Seldom has any Secretary of Agriculture taken overt action

to effectuate this charge. For example, under fruit and vegetable marketing orders the decisions of the administrative committee—made up of producer and shipper interests—with relatively few exceptions have had the force of law. Under milk marketing orders the authority given the Secretary to establish rules of competitive conduct have never been utilized. The public interest responsibilities under these laws could be more effectively enforced.

3. The Packers and Stockyards Act has been the main device for regulating competition in the meat packing industry. From time to time serious questions have been raised concerning the extent to which this law and its enforcement priorities is being enforced. Dramatic structural changes of horizontal, vertical, and conglomerate dimensions have occurred: the basis for pricing in the meat industry has become progressively shallow; contracting is becoming increasingly prevalent; rate-making still continues an important function of the act despite a larger number of alternate outlets available to the producer. Little has been done to address the issues raised by these changes. The reason, it is frequently suggested, is that questions of jurisdiction exist between the USDA, the Department of Justice, and the FTC. While this is true, nothing is accomplished as long as each agency uses the same excuse for not acting on problems of critical importance to producer and public interests.

4. Other Department of Agriculture regulations require initiative to protect competition. Certain regulations are not enforced unless a producer is willing to divulge his identity and risk substantial economic retaliation and injury. Under the Perishable Agriculture Commodities Act and the Agricultural Fair Practices Act the department has been unwilling to allow a producer association to render a complaint on behalf of its producers unless the affected producers are specifically identified. Greater initiative should be exercised in such cases to protect producer interests. Where the department serves a licensing function, a systematic method for monitoring the extent to which the provisions of the law are being carried out should be an integral part of the program. If clarification of legislation is required in order to proceed, the department should be an active advocate of such clarification.

The main responsibility for enforcement of these regulations currently lies in the Department of Agriculture. This can be justified on the grounds that special expertise exists within the department to understand, analyze, and evaluate agricultural programs. Resolution of these problems requires more vigorous enforcement, and cooperation with other agencies of government such as the FTC and the Department of Justice.

If the USDA cannot or does not effectively enforce the laws over which it has responsibility, consideration should be given to either the establishment of a new regulatory agency outside the department—as was done in the case of the Commodities Futures Trading Commission—or to transfer enforcement responsibility to the FTC or the Department of Justice. It seems apparent, however, that the Department of Agriculture, with its specialized expertise, should be able to administer these laws better than any other government agency.

Antitrust regulations applied to food industries are currently enforced in stringent—if not doctrinaire—fashion cases of mergers or acquisitions of firms at the same market level. Such enforcement has not stemmed the trend toward increased concentration, accomplished by internal firm expansion. At the same time, it has tended to force large growth-oriented firms to either expand vertically—backward or forward—or conglomerate into new product lines. Both types of growth have the potential not only to distort the structure of agriculture but also to lead to less competition thus placing the producer in an even more disadvantaged position. In the long run, uncontrolled vertical integration has the potential for completely removing the independent farmer as a viable force in agriculture.

Vertical integration, whether by contract or ownership, has many desirable coordinative and efficiency-enhancing attributes; therefore, a doctrinaire approach to vertical and conglomerate growth could be as harmful as a doctrinaire approach to horizontal growth. Despite this fact, several states have taken steps to prohibit corporate ownership of agricultural land.

On the other hand, there has been no substantial federal action to curb vertical integration by contract or ownership. It seems doubtful any precise policy can be developed and applied equally to all industry situations. An aggressive case-by-case approach aimed at developing a body of case laws to cover vertical and conglomerate integration in food industries would appear to be a desirable strategy. Such an aproach should be pursued in the early stages of development on a case-by-case and industry-by-industry basis.

Government authorized, regulated, or enforced monopolies are particularly prevalent in the food industry or in closely allied industries such as transportation. To an important extent, the problem is one of overregulation and duplication of regulatory authority: Federal marketing orders duplicate state marketing orders in milk, fruits, and vegetables; federal licensing laws are piled atop state and local licensing laws; sanitation labeling and inspection requirements duplicate and sometimes conflict with one another. Frequently, state laws are applied in a discriminatory manner to foreclose an out-of-state product from a market.

The Department of Agriculture, the Department of Health, Education and Welfare, the Department of Justice, and the Federal Trade Commission should move vigorously against regulations that impede competition, sanction monopoly, or discriminate against producers and firms in other states or localities. In many cases these laws can be struck down on the basis of federal supremacy. An ad hoc commission may be needed to identify priority areas of abuse. Educational programs to alert consumers to the negative impact of such laws should be encouraged and developed.

In the end, the key to effective regulation lies in constant adjustment to changing conditions for the common good. Bad regulations come into being not by design but by default: regulatory officials fail to change with the times. Such default creates economic distortions and incentives contrary to the public interest. This comment applies to the regulation of railroads as well as to milk, meat, and grain.

Complete de-regulation is not the answer. The answer instead lies in recognizing the direction in which we want to change and by progressively moving in that direction with a balanced package of regulatory change and assistance.

Fine Tuning To Improve the Producers' Market Position

New initiatives are needed by producers to develop a more prominent role as competitors and, in limited instances, to become more effective bargaining agents on their own behalf. In the past, much of this initiative has come from cooperatives, but the cooperative community is not changing as rapidly as required to meet the needs of modern agriculture. The cooperative movement needs to be revitalized—to become a major force in grain export marketing, to effectively represent producer interests in livestock marketing, and to reassert its competitive leadership in areas where it has traditionally had strength.

New producer initiatives should not be aimed exclusively toward the advancement of cooperative involvement in markets. Instead, they should address a wide range of organizational forms, including individual producer integration, the formation of producer corporations, partnerships, and limited partnerships. To this end a separate agency, the Farmers Marketing Service, should be established within the Department of Agriculture.

The Farmers Marketing Service would have three primary roles:

1. To conduct applied research on new opportunities for producer initiatives in marketing. Suggested areas for initial exploration could include the formation of producer-owner export cooperatives to represent producer interests in the highly-concentrated and corporate-dominated export market, the reestablishment of producer initiative in the livestock industry, and the expansion of direct farmer-to-consumer marketing.

2. To educate and provide assistance to producers in cooperation with federal and state extension services so they may take advantage of these marketing opportunities.

3. To marshal within the Department of Agriculture and other government agencies the necessary financial and marketing assistance to get producer initiatives on a firm economic base. If a substantial producer export cooperative were established, the Foreign Agricultural Service should look on such an organization as a significant new client for its market development and sales referral efforts. Purchasing activities by state-trading nations could be channeled directly to the producer and thereby expensive middlemen functions could be bypassed, coordination could be improved, and profits could be channeled to the producer level.

There are times when government sanction of bargaining would appear to be a necessary producer strategy for fine tuning producer interests. Such are the cases of processed fruits and vegetables and poultry produced under contract with an integrator where the grower does not hold title to the produce he produces. In many instances the producer finds himself at the mercy of the processor, financially as well as for a market. In cases where integrator control is essential for coordination and efficient production of a uniform product, government support for bargaining activities—including education, research, and even

legislation—would appear essential. If this support is not given, these piece-wage laborers could be organized by labor unions—an option considered contrary to the public interest since it would establish monopolizing control over production resources.

Fine Tuning To Improve Market Information and Pricing

Intelligent and informed producer decisions foster more competition as well as efficiency in the allocation of resources. At a time when market conditions change on an hourly basis, up-to-date information for decisionmaking is even more critical. While the United States has one of the most advanced market information systems in the world, there are still major gaps in it. Too, the producer is frequently not in the best position to access or interpret market information. The following suggestions are designed to at least partially remedy these problems: [4]

1. Purchased inputs constitute an ever-increasing portion of production expenses; yet our information system is nearly devoid of data on purchased input prices. At any single point in time, there is greater variation in input prices than product prices. Lack of information is at least partially responsible for this wide variation. Public price reporting of purchased inputs such as fuel, formula feeds, fertilizer, chemicals, and farm machinery is recommended.

2. With contract and ownership integration becoming increasingly prevalent, terms of trade other than price become more and more critical to the producer contemplating entry into such arrangements. The reporting of contract terms on a timely basis is virtually nonexistent. This leaves the growers of broilers, turkeys, and processed vegetables with no objective basis for evaluation and comparison. Two steps are suggested as remedies. First, it is recommended that the USDA begin reporting the terms of contracts prior to and during sign-up periods, and second, it is recommended that a standard contract be prepared by the USDA representing prevailing industry practices and producer interests. Such a contract would serve as a standard for producer contract comparison.

3. Improved price reporting is at least partially dependent on the improvement of grade standards used in product descriptions and identification. Major revision is needed for many grade standards to reflect producers consumer and/or industry quality attributes and values in the form of appropriate price levels and differentials. A few examples needing immediate attention can be cited: grain grades should be modified to better reflect differences in protein content and product end-uses; consumer grades and standards for pork should be established; and fresh fruit and vegetable grades should reflect maturity and internal nutritional and eating quality rather than external appearance only.

4. Since the 1972 Russian wheat sale, significant advances have been made in reporting international transactions; yet the fact remains that sales are not reported until after transactions are consumated. During the period of negotiations, the opportunity exists for a major buyer to act with more knowledge of pending changes in market demand and price conditions than other buyers or sellers. The ability to

[4] Other papers in this series provide more detail on some of these suggestions.

thus use information to one's own advantage might enable him to reap substantial benefit. To at least partially remedy the above problems, three suggestions are made:

(*a*) In order that news of a substantial sale may be immediately reflected in the market, it is suggested that the daily limits on the movements of prices on futures markets be removed.

(*b*) The increasing prevalence of state traders in international markets puts a producer in a much more vulnerable position. Accordingly, it is recommended that before a state-trading nation or a representative of a state-trading nation approaches a company for United States grain it be required to report its intentions to the Government, including an estimate of its purchases in the current transaction as well as for the remainder of the crop year. Such intentions would then automatically be made public by the Government.

(*c*) Much of the international intelligence on crop and potential demand conditions is transmitted to the United States by the agricultural attaches stationed in countries with which we have diplomatic relations. These reports have been a fairly accurate indicator of pending developments in international trade of significance to the United States producer. With their already-existing worldwide intelligence networks, it is apparent that major grain exporters have better access to such information than do producers. Accordingly, it is recommended that all agricultural attache reports on crop and demand conditions be made public at the time they are received.

5. Currently, local market prices are not available to producers in most areas of the country. As local market areas expand through improved transportation, it becomes increasingly difficult for a producer to be informed of price differences within his market area; therefore, improved price reporting at the producer level is needed, including the reporting of contract terms at the local level. The importance of television as a medium for transmitting market information has not been realized. Expanded use of separate public or cable television channels for market news in rural areas needs to be explored. The direct and continuous broadcast of agricultural news service teletypes would be possible. This would provide up-to-date information on prices as well as major market and news developments.

6. Market information is useless unless it is integrated into the decision framework; therefore the continued and upgraded support for activities to improve the economic aspects of producer decisions is essential.

How To Achieve Fine Tuning

The suggestions made in this paper do not require legislation; they require only administrative action. Some exceptions may exist in cases where clarification of existing legislation is needed or in instances where the Secretary of Agriculture or other responsible agency head cannot, should not, or does not enforce a legislated responsibility. In the latter case it would be necessary to seek legislation to transfer that responsibility to another agency.

To get one or more of the above actions implemented will require producer initiative. Some will require more initiative than others be-

cause of variation in the level of bureaucratic resistance to change or pressure placed on an administrator by those adversely affected by the action. In some instances, pressure on elected as well as appointed officials will be required not only to get the attention of responsible administrative officials but also to get the appropriations needed to carry out expanded programs.

Effects of Fine Tuning

The objectives of the fine tuning suggestions made herein are to improve market access, to enhance competition for farmers' products, and to bring about a better balance of the farmer's position in the market without injuring consumers. The magnitude of the effect is dependent on which suggestions are implemented and to what degree.

Producers would be in a more favorable market position if the system is fine tuned. While not assured of a substantially higher price, they would be assured of a more competitive price and access to all alternative markets. Also, they would be less vulnerable to corporate takeover. With more information available, farmers would have a better basis to make decisions. Production would be more oriented to the needs of the market, although not as much as in the case of full integration.

The consumer's position in a finely tuned market place would not substantially change. A more competitive producer price passed through to the consumer means higher consumer prices. On the other hand, reflecting price advances and declines at the producer level through to the retail level likely means somewhat lower prices. Consumers would be protected against exploitive market abuses of producers and agribusinesses. Improvements in grading would provide improved consumer decisions and production of products in the consumer's interest.

Agribusiness is the most probable loser if fine tuning is implemented, but its losses can easily be exaggerated. With increased dependence on exports, maintaining our competitive position in international markets is dependent on maintaining an efficient domestic production-marketing system. Elements of monopoly and imperfect knowledge foster stagnation and inefficiency. They impair our ability to compete in a world market. Despite this word of caution, the fine tuning suggestions do place producers on a more even plane with agribusiness; thus agribusiness is a relative loser.

Rural communities would benefit from the suggested fine tuning approach as the thrust is toward decentralization. The results would be more farms and more jobs in the rural areas and thus a larger tax base. More rural communities would have a basis for sustained growth.

The general public would balance on the benefits of fine tuning. The costs would be somewhat higher levels of government activity and involvement while long term benefits would be greater competition and less centralization of power in the hands of a few.

Limits of Fine Tuning

Certain problems cannot be solved by the fine tuning strategy and therefore would require legislative action if they are to be solved by

government. Included are the basic problems of uncertainty, price instability, and cycles, such as the hog and cattle cycles. However solving such problems would require considerably higher degrees of government intervention than presently exist. The other papers in this series provide other suggestions most of which go beyond the fine tuning approach herein. Fine tuning is a process that is continuous, a process that corrects or causes more inefficiencies or inquities, depending on the skill of those involved. To facilitate fine tuning requires that information be made public and that the public administrators and representatives keep the public interest in mind.

INDUSTRIAL RESTRUCTURING: A POLICY FOR INDUSTRIAL COMPETITION

(By Leon Garoyan[1] and H. M. Harris, Jr.[2])

Introduction

There is evidence that high levels of industry concentration are associated with excessive price inflation experienced in recent years, and price inflexibility during periods of lower demand. For example, the price of automobiles and pickups continues to escalate in 1974–75 despite lower consumer demand. The prices of items farmers buy continue to rise despite weakened demand at times and marketing margins and retail prices on food are relatively constant despite substantial shifts in supplies and raw product prices. Prices are observed to rise faster in more concentrated industries, while rising less in more competitive industries. The reason industry concentration is important here is that farmers are affected. The results of high concentration or lack of competition affects their incomes directly, regardless of where the monopoly power exists.

Clearly there is nothing inherently wrong with the free enterprise system upon which the United States social, political, and economic structures are based. To the contrary, problems occur when major imperfections are allowed to persist which prevent the free forces of competition from functioning. While we consider mainly the issue of size and concentration of unreasonable market power in agriculture in this paper, it is not always possible to separate agriculture from the rest of industry.

The Current Status of Antitrust Legislation, Enforcement, and Concentration

Major Antitrust Laws.—The United States policy on competition is contained in three acts that apply generally, and one that is specific to agriculture. In addition, a number of exemptions are provided. The Capper-Volstead Act is one such exemption and will be discussed later in the paper. A brief summary of relevant antitrust statutes is given below.

1. The Sharman Act of 1890 declares illegal: Contracts, combinations, or conspiracies in restraint of trade; and monopolizing, attempting to monopolize, combining or conspiring to monopolize any part of the interstate trade or commerce. Both civil and criminal cases may be filed.

2. The Federal Trade Commission Act of 1938 declares unfair methods of competition and unfair or deceptive acts or practices in commerce to be unlawful.

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3. The Clayton Act as amended by the Robinson-Patman Act of 1936 prohibits price discrimination where the effects of such discrimination may be to substantially lessen competition or tend to create a monopoly. The act also prohibits exclusive-dealing leases, contracts, rebates or discounts, and acquisition of stock or assets by one corporation or another where the effect may be to substantially lessen competition or tend to create a monopoly.

4. The Packers and Stockyards Act of 1921 (amended in 1958) provides for regulation of interstate and foreign commerce in livestock products, dairy products, and poultry products. The act declares monopolies, trade restraints, price manipulation or control, and other unfair trade practices in such industries to be illegal.

Existing antitrust laws have not been effective in limiting growth of large conglomerates that wield great political and economic power, nor does their existence imply vigorous enforcement to stem noncompetitive practices.

Enforcement Activity by Antitrust Agencies.—One way to measure the vigor of antitrust activity over time is from statistics on the number of monopoly charges filed and their disposition.[3] This provides a measure of activity, but says nothing of the quality of the cases filed and their economic significant. Justice Department activity in the first decade after the Sherman Act consisted of 18 charges filed, of which ten were lost. In the period from 1890–1949, a total of 1,005 charges were filed, of which 295 or 29 percent were lost. The Federal Trade Commission, from their beginning in 1917 through fiscal year 1949, filed 1,121 complaints, of which 386 or 34 percent were dismissed. In the period 1950–66, the Justice Department issued 914 complaints, and the FTC, 1,317, for a total of 2,231. Not all of these complaints were taken to court.

An important part of antitrust laws is the right for private antitrust cases. Evidence shows that for the 16-year-period 1951–66, government agencies took to the courts 579 civil and 329 criminal complaints, for a total of 908 cases. Meanwhile, a total of 6,537 private cases had been filed by firms.[4] The number of court actions is small in view of the size of the United States economy.

Concentration in United States Industry.—The phenomenal growth in size of corporations over time is reflected by data in Table 1. The number of firms with assets of over $1 billion increased from one in 1909, to 115 in 1972, and in 1972 these accounted for 52 percent of all corporate assets in the United States. Firms with assets over $250 million increased from 3 to 350 during this same period and accounted for 70 percent of total corporate assets. While inflation has certainly been a factor in this growth, it is not the prime factor. For example, adjusting 1909 assets of corporations in terms of 1972 prices would increase by only two the number of corporations with assets in excess of $1 billion.[5] Much of the growth reflects conglomerate growth.

These figures relate to absolute growth of firms. Mueller provides data that indicate concentration ratios for 168 United States industries have increased by four percent from 1947 to 1970. However, for 98

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[3] "Congress and the Monopoly Problem," Select Committee on Small Business, House of Representatives, 89thh Congress, 2nd Session, 1966, tables pages 553–558.

[4] "Congress and the Monopoly Problem," op. cit., tables pages 553–558.

[5] W. F. Mueller, "Current Policy Issues in Antitrust," unpublished paper presented at "Conference on Industrial Organization: Policy Planning in Antitrust," Southern Illinois University, April 1973.

producer goods industries—producing products used as inputs for further manufacture—concentration actually dropped during this period. (See Table 2.) But for 70 industries producing consumer goods, concentration increased by 5.8 percentage points. Further, the greater the degree of product differentiation within these industries, the larger the rate of increase in concentration. For example, industries with low product differentiation experienced a 0.4 percentage point increase.

Concentration in agricultural industries is lower than for the rest of the United States economy. Within agriculture, most production input classifications are less concentrated than are agricultural product processing classifications. (See Tables 3 and 4.)

Ratios for input classifications show no consistent pattern between 1947 and 1970 on the basis of national concentration ratios. When these are adjusted to a regional level however, concentration increases considerably over national ratios. At local levels it is apparent that farmers have few, if any, alternative suppliers. Much of this is believed to be caused by economies to scale in distribution, so there are trade-offs involved, between farmers having more choice or paying for less efficient services.

Local alternatives for farmers in marketing agricultural products are also few. Of course concentration is not the sole or even the most important factor in determining the number of alternatives available to farmers. Anticipated consumer demand and contracting policies of processors are also important.

For manufactured foods such as cereal preparation, flour milling, ice cream and cheese, liquor, and shortening, high levels of concentration exist. But national data are not useful in measuring alternatives in local markets. For example, the four-firm national concentration ratio for macaroni and spaghetti is 31 percent, but in regional markets it is not unusual for concentration to reach 98 percent.

Alternatives for Dealing With Market Power

The realistic alternatives for dealing with market concentration and power include the following:

Enforcement of existing statutes and new regulations to maintain competitive behavior.—Despite the fact that the United States economy has grown substantially since the turn of the century, there have been fewer large cases brought by regulatory agencies involving actual or attempted monopolization in the 1960's and 1970's than in the two decades following passage of the Sherman Act in 1890. The experience of enforcement has been subject to politics; and manipulation and—depending upon political philosophies—has been unequal. In brief, enforcement has not been as vigorous or as effective as needed. We therefore chose not to pursue this alternative further in this paper because it is evident that the existing procedures have not inhibited increased concentration.

Encouragement of countervailing power.—Some aspects of antitrust public policy encourage countervailing power to be developed and used against those who possess large amounts of market power. Labor union, fishery cooperatives, and farmer cooperatives operate under limited but important exemptions to some—but not all—antitrust laws. Other industries, including sports and insurance, also enjoy some exemptions. The administration of existing laws—or lack of it—

has made possible the development of countervailing power where it previously was nonexistent. The continued development of countervailing power results in unequal power among firms which may lead to further abuse of competition, but on a much larger scale. It also results in an economy of giant sources of offsetting power, each capable of exerting strong influence over other sources and society as a whole. If left unabated countervailing power could lead to the crippling of an entire economy, even if it is regulated by existing agencies under existing laws.

We do not believe the concept of countervailing power is an ultimate solution to problems of large size and market power, even though we recognize the need for more economic equity in current enforcement practices in many industries. Enforcement of existing laws has not discouraged widespread development of conglomerate power in the United States, and in fact, has been ineffective in coping with this aberration of economic power.

Industrial restructuring.—Economists, industry leaders, and politicians have questioned the exact relationship between market concentration and economic power. Recent experience should convince us that high concentration provides considerable economic discretion to large firms. In competitive industries, firms lack such discretion. An obvious solution is to restructure high-concentration industries so that no firm is large enough to possess unreasonable market power; then a firm would be forced by its competitors to offer competitive prices and terms of trade to both its customers and its suppliers. A way to achieve this would be to require very large firms to divide into several firms, either as competitors in the same industry, or, where practical, into different industries. The remainder of this paper focuses on this rather broad and controversial policy proposal: the diffusion of concentrated industries.

Basis for Diffusing Concentrated Industries

The basis for a divestiture proposal is fourfold:

1. A more competitive market is presumed to be preferable to either monopoly control or government bureaucracy.
2. Beyond some maximum level of concentration, a competitive free market does not and cannot exist.
3. Current antitrust laws do not cope effectively with existing market power in much of the economy.
4. Performance in concentrated industries is economically, politically, and socially less desirable than that of moderate- and low-concentrated industries.

Carving up large companies into two or more separate entities may seem a far-fetched idea to many. In fact, it is not far-fetched; it is not even new. A number of prominent economists—George Stigler, Carl Kayson, W. F. Mueller, and Donald F. Turner among them—have argued persuasively for just such a step. The courts, while generally reluctant to take such a drastic action, have, since 1890, ordered corporate dissolution, divestiture, or divorcement in 26 instances involving giant firms.

Some of these court-ordered split-ups were extreme. Examples include the division of Standard Oil of New Jersey into 33 pieces in

1911; the dissolution of the American Tobacco Company into 16 parts, including American Tobacco, Liggett and Myers, P. Lorillard, Reynolds, and the American Snuff Company; the separation of duPont into three powder manufacturing firms; the forced sale of the Pullman Company's operating branch from its parent sleeping car manufacturing operation; the court-ordered sale of over 1,000 motion picture theatres owned by the five leading movie-producing firms; and the break-up of ownership of individually integrated activities by the four major meat packing firms by the Packers Consent Decree in 1920.

Other split-ups have been milk, such as the ruling that duPont end its joint ventures with another large chemical company; and the decision that United Shoe Machinery Corporation divest its tack, nail, and eyelet manufacturing subsidiaries.

Even now pressure is being brought to bear for the break-up of large companies: rumblings are heard about breaking up the giant United States oil companies; and, within the past few months the Federal Trade Commission announced it was prepared to bring suit for dissolution against General Motors. But the courts have been reluctant to perform surgery on huge firms; since the mid-1950's only a handful of divestitures—all of them small—have been ordered.

Existing legislation is inadequate for restructuring concentrated industries. First and foremost, the Sherman Act is vague. Economists and lawyers have debated the meaning of the word "monopolize" for over fifty years. As a consequence, antitrust action is much more likely under existing law for anticompetitive conduct or corporate behavior, not simply for the possession of monopoly power as such. Furthermore, even if federal antitrust agencies were willing to vigorously enforce legislation to restore greater competition in concentrated industries, there are serious impediments to such activity. First, the cost of ligitation in large "monopoly" cases is overwhelming. Present appropriations are inadequate to permit pursuing the Section II Sherman Act standard against the vastness of concentrated industries, let alone against the very large firms within them. This probably results in citing smaller cases of alleged monopoly power abuse, rather than tackling the large ones. Second, manpower limits exist in federal agencies. Third, large firms may use their political power to apply pressure on congressmen, senators, and appointed officials. The net result is that changes in concentration over time indicate the rate of concentration is increasing more rapidly than the success of federal agencies in restoring competition.

Implementing Restructuring

Based on the preceding evidence, we conclude new approaches to restructuring are needed, namely: a new mandate from the Congress indicating it supports a public policy designed to improve the effectiveness of competition in the economy; and a new statute to permit effective and expeditious steps to bring this about.

In 1973 Senator Philip Hart introduced legislation—"The Industrial Reorganization Act" (S. 1167)—to enable restructuring where industries are concentrated and where market power exists. The main

provisions of this act which is still pending action were designed to produce these results:

1. Provide a strong congressional mandate for a vigorous policy to restore competition in concentrated industries through "judicious industrial restructuring in key industries."

2. Overcome the problem of definition of monopoly power in present legislation. Possession of monopoly would be specified by standards.

3. Establish an organizational and procedural framework that could expedite relief in the most important segments of the economy by:

(*a*) establishing an Industrial Reorganization Commission for the sole purpose of enforcing the act;

(*b*) directing it to give top priority to seven important concentrated industries;

(*c*) establishing a special Industrial Reorganization Court that would provide a panel of judges to deal specifically with cases originating under the act.

4. Authorize the commission and court to explore a variety of ways for reorganizing an industry to enhance competition. The Industrial Reorganization Commission may explore methods of increasing competition beyond those available to the Industrial Reorganization Court. For example, in some cases it might recommend that government actions be taken to encourage new entry in an industry; in others it might consider the desirability of establishing government-owned enterprises in highly concentrated industries much like Sweden has done with apparent success in the drug industry.

To overcome existing limitations of the Sherman and Federal Trade Commission Acts it would be necessary to define monopoly quite specifically. For example, the Industrial Reorganization Act provided that "there shall be a rebuttable presumption that monopoly power is possessed" by any corporation that persistently earns after-tax profits exceeding 15 percent; if there has been no substantial price competition among two or more corporations for a period of years; and if four or fewer corporations account for 50 percent or more of sales in a relevant economic market.

A corporation falling within these criteria would have the burden of rebutting the presumption that it had monopoly power. Three defenses against such a charge would be allowed:

1. The degree of concentration was due solely to the required economies of scale needed to operate an efficient-sized operation.

2. The market power of the firm stemmed from demonstratable superior efficiency and innovativeness.

3. The size of firm resulted solely from the ownership of valid patents.

Consequences of Reducing Market Power

Industries Affected.—The number of firms and industries affected by a restructuring policy would depend on the degree of concentration chosen to represent unreasonable market power and on the delineation of meaningful relevant markets. Even taking the relevant market to be a national one and attacking only industries where the top four firms control 80 percent of all sales, a number of industrial giants would become likely candidates for fragmentation. Among them

would be firms in such industries as steel, automobiles, cans, glass bottles, cement, tires, and oil refining. Note that restructuring such industries with smaller but more firms would not directly affect the marketing system for agricultural products; however, if the alleviation of unreasonable market power was reflected in lower prices for these products, farmers as purchasers of such goods would benefit.

Likely candidates for divestiture within the food industry would include cereal manufacturers, tobacco manufacturers, and grain exporters. Using lower market share criteria and/or a more tightly delineated relevant market on the regional or local level, a whole array of firms within the agricultural marketing sector would be included. Among others, the list would certainly include dairy processors, retail food chains, general food manufacturers, farm machinery companies, livestock packers, and aspects of the broiler industry.

Consequences of Reducing Market Power in Selling.—It is difficult to project the probable consequences of an aggressive fragmentation policy that succeeds in reducing market power within the economy; however, some crude estimates have been attempted. Scherer estimates the total loss to our economy from market power at 6.2 percent of the gross national product. Some economists believe the social loss to be less than this, but Scherer believes his estimate to be moderate, even though not precise.[6]

For sake of discussion, suppose Scherer's figure is accurate. At current GNP levels wiping out this welfare loss to the economy would mean a $90 billion savings. The agricultural sector, from farmer to consumer, is huge—larger than the automobile industry, oil, or even the defense establishment. Fully 10–15 percent of the savings might be expected to occur in the agricultural sector. Translated into net farm income, an increase of $300–$400 million annually might be realized just because of increased consumption of food caused by lower prices at the retail level. On top of this would be added savings by farmers in terms of reduced costs of production inputs supplied by presently-concentrated industries. A five percent reduction in production expenses would result in an approximate 15 percent shortrun increase in farm income.[7]

Potential gains of this magnitude may be unrealistic. But even if realized savings and income gains to farmers and the public at large are only one-half or one-fourth as great as those estimated above, a policy of fragmentation would seem to merit serious consideration. In addition, there could be favorable general effects on society and government from reduction of political and economic power.

Consequences of Reducing Market Power in Buying.—It is important to note that enhanced farm prices owing to the fragmentation of agricultural marketing firms who are first buyers of farm commodities were not considered in the above speculations.

Welfare losses caused by market power in buying are even more difficult to quantify than are those resulting from monopoly power in selling. Placing any figure on such costs would be purely guesswork. But in California an antitrust suit by nine cattle producers against the

[6] F. M. Scherer, "Industrial Market Structure and Economic Performance," Rand McNally & Co., Chicago, 1970.

[7] Farmers would be expected to increase production in response to lower costs; thus this increase in income might not be maintained as farm prices fall back.

three largest food retailer firms resulted in two out-of-court settlements and one $32 million judgment for damages.[8]

We know for a fact that producers of many farm products are at a severe disadvantage vis-a-vis the much larger, often better-informed potential buyers of their crops. As agricultural marketing firms become fewer and larger, more marketing alternatives are becoming foreclosed to the producer, making him even more at the mercy of a few buyers or even a single purchaser.

The meat packing industry serves as a good example here. At the national level, the meat industry is not among the highly concentrated ones. The largest four firms control less than one-fourth of the market. Moreover, concentration at the national level is much lower today than it was in the early 1900's.

But what about the more localized level, which is the relevant market to a farmer selling his livestock? Engleman and Arpelin of the USDA found that in the North Central region the top four firms slaughtered over 75 percent of all cattle in two states and over 65 percent in four others. In hogs, the top four firms accounted for over 75 percent of slaughter in seven states. For lambs, the big four account for 100 percent of all commercial slaughter in the top producing states.[9]

Even though we are not prepared to place a dollar figure on the possibility of enhanced returns to farmers by the forced restructuring of concentrated buyers of farm products it appears that existing evidence again calls for a serious look at a fragmentation policy as a benefit to farmers and the public.

Effects on Farmer Cooperatives and Labor Unions.—By virtue of their organization, farmers' marketing cooperatives that qualify have been granted a narrow but significant exemption from monopolization and conspiracy by the Capper-Volstead Act. Presently, the Justice Department and Federal Trade Commission are expressing concerns about such exemptions. Pursued to the extreme position, farmer marketing cooperatives could probably not exist without such exemptions because the cooperative itself is defined as being joint action by its members.

Marketing orders and other related agricultural programs have also been granted exemption from antitrust laws, but are now under attack by federal regulatory agencies and by consumer activists.

Labor unions have also been granted exemptions similar to farmer marketing cooperatives, and they have prospered and thrived under this exemption. Labor union exemption extends not only to their rights to organize workers, but also to their operating procedures such as industry-wide negotiation. This type of exemption has not been extended to farmer bargaining cooperatives which must negotiate on an individual firm basis to remain within the law. Thus, labor unions enjoy special exemptions.

It must be argued that if public policy remains supportive of the countervailing power concept of competition, efforts of federal regulatory agencies to curb the development of cooperative marketing associations would be counter to the public interest. Few if any farmer

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[8] The judgment was appealed, but before coming to trial was settled out of court for $9.2 million.

[9] Aspelin, A. and Engelmon, G., "National Oligopoly and Regional Oligopoly in the Meat Packing Industry." Paper presented at annual meeting of American Agricultural Economics Assoc., Gainesville, Fla., 1972.

cooperatives are able to achieve profits comparable to large, general, food-manufacturing firms. Thus, it appears that current antitrust activity against farmer cooperatives is a deliberate choice of federal agencies, not because of performance, but because of ease and cost of filing complaints and court procedures against cooperatives, instead of tackling the large food manufacturers and distributors, including conglomerates. The selection process is seemingly simplified for regulatory agencies.

If legislation requiring fragmentation of concentrated industries were enacted, there is a strong argument to make it economy wide, rather than only for portions of the economy. Thus, farmer cooperatives possessing characteristics of the large general corporations would be equally and equitably subject to criteria for competition in such legislation. At the same time, the vast market and economic power of labor unions must also be curtailed on an equal and equitable basis with other possessors of economic power.

Concluding Thoughts

The choices are easy to identify, but the decision criteria are difficult to specify. We have assumed that despite the problems of the United States economy, it generally remains the most preferred and acceptable economic and political system; that is, we are and will remain committed to a competitive market system. To achieve the most that such a system can provide to a society, the choices seem to be these:

1. Existing antitrust laws, with necessary amendments, should be more vigorously enforced. The available evidence suggests this alternative has major weaknesses.

2. Countervailing power, somewhat related to the first alternative, has resulted in unequal development of power so, in effect, there is freedom to counter existing power. The practical ability to do so is difficult because of the advantages held by large firms already possessing superior strength.

3. Restructure concentrated industries to make possible greater competition. This has been the focus of this paper.

We have been critical of the agricultural market system. While the criticism may have been warranted, just as easily praise in at least equal doses could have been given. Our system is not perfect, but it functions more efficiently than any other in the world. We have not presented arguments in favor of big business—and there are many that could have been made.

Changes need to be made in our economic system. We have described a radical one. Some may view the proposal as a backward step; others may see it as the first meaningful step toward economic reform since passage of the Clayton Act in 1914. The authors view it as neither, but simply as one of a number of alternatives that merit our society's serious consideration.

We are of the opinion that only in a less concentrated environment can the agricultural marketing system be assured of providing equity for farmers and consumers. Each of the papers in this series offers suggestions for doing this. The industrial restructuring alternative presented in this paper may be the broadest and most radical alternative put forward. Before rejecting this alternative, the public should bear

in mind that, too often, we change our legal and economic institutions with constant minor tinkering, sometimes of a purely cosmetic nature. Perhaps a major overhaul is needed. If so, industrial restructuring may be the best way to restore greater competition in concentrated industries.

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"Value-of-Shipments Concentration Ratios by Industry," Annual Survey of Manufactures, 1966 and 1970. U.S. Government Printing Office, 1968 and 1972.

TABLE 1.—NUMBER OF MANUFACTURING CORPORATIONS WITH ASSETS EXCEEDING $250,000,000 AND $1,000,000,000, AND SHARE OF TOTAL ASSETS OF CORPORATIONS ENGAGED PRIMARILY IN MANUFACTURING 1909–72 [1]

[Assets in millions]

Year	Firms with assets over $1,000,000,000			Firms with assets over $250,000,000		
	Number	Assets (thousands)	Share of total corporation assets (percent)	Number	Assets (thousands)	Share of total corporation assets (percent)
1909	1	$1,822	([1])	3	$2,480	([1])
1919	1	2,366	([1])	16	7,900	([2])
1929	2	5,378	8	31	18,390	27
1935	3	5,132	9	25	14,882	26
1948	12	20,107	17	59	36,692	33
1959	24	61,207	27	127	115,357	50
1969	87	229,461	46	293	330,592	69
1972	151	321,158	52	350	435,708	70

[1] Taken from W. F. Mueller, "Current Policy Issues in Antitrust," (unpublished paper) 1973.
[2] Total asset data for all manufacturing corporations not available.

Source: Number and assets of corporations for 1909 to 1948 are based on Collins and Preston, "The Size Structure of the Largest Industrial Firms, 1909–58," "American Economic Review," December 1961, pp. 1005–1011. Total assets for these years are based on Internal Revenue data. Firm data and asset data for 1959–72 are for the 1st quarter of each year, respectively, as reported in FTC–SEC "Quarterly Financial Report for Manufacturing Corporations" for various years. Asset data are for corporations engaged primarily in manufacturing, both domestically and abroad. Therefore, some manufacturing assets and assets of foreign operations are included among the assets of the largest corporations and by all corporations. The data do not include enormous amounts of nonconsolidated assets held by the largest corporations. See FTC staff report on "Corporate Mergers," 1969, p. 175. Thus the figures for 1969 to 1972, at least, likely understate the largest corporations' share of total assets held by all corporations engaged in primarily manufacturing.

TABLE 2.—AVERAGE FOUR-FIRM UNWEIGHTED CONCENTRATION RATIOS BY TYPE OF INDUSTRY FOR 168 INDUSTRIES, 1947–70

Date	Industries	Producer Goods (N=98)	Consumer goods: Degree of differentiation[1]			
			All (N=70)	Low (N=20)	Moderate (N=34)	High (N=16)
Average unweighted 4-firm concentration:						
1970	42.6	42.9	42.2	28.2	41.1	62.3
1967	41.5	42.0	40.7	26.0	39.5	61.6
1963	41.4	42.5	39.9	25.8	38.8	59.8
1958	40.4	42.6	37.4	23.8	36.7	55.9
1954	40.9	43.5	37.1	25.3	35.8	54.6
1947	40.9	44.2	36.4	27.8	35.1	49.6
Change, 1947–70	+1.7	−1.3	+5.8	+.4	+6.0	+12.7

[1] The classification of industries as between producer goods and consumer goods, as well as by the degree of product differentiation is based on the classification system developed in Bureau of Economics, Federal Trade Commission, "Comparable Concentration Ratios for 213 Manufacturing Industries Classified by Producer and Consumer Goods and Degree of Product Differentiation 1947, 1954, 1958, and 1963," Mar. 15, 1967.

Source: W. F. Mueller, "Current Policy Issues in Antitrust" (unpublished paper) 1973.

TABLE 3.—INDUSTRY CONCENTRATION RATIOS FOR SELECTED AGRICULTURAL INPUTS

Classification title	SIC code No.	Value of industry shipments percent accounted for by the 4 largest companies								
		1970	1967	1966	1966 [1] adjusted for factors	1963	1958	1954	1947	Factors [1] adjusted for
Fertilizers	2871	30	35	34	(50-60)	34	34	36	36	R, B
Fertilizers, mixing only	2872	24	23	21	(40-50)	20	18	20	18	R, B
Agricultural chemicals n.e.c	2879	47	39	36	36	33	----------			
Petroleum refining	2911	33	33	32	(65)	34	32	33	37	R, B
Lubricating oils and greases	2992	39	38	36	(50)	36	29	28	36	R, B
Farm machinery	3522	40	44	45	(70)	43	----------			B
Industrial trucks and tractors	3537	52	48	49	(60)	54	52	50	57	B
Food products machinery	3551	21	22	21	(30-40)	22	16	16	18	B
Tractors	3521	----------			(71)	----------	69	----------	67	

[1] R: Markets are mainly regional in scope—L: Markets are mainly local in scope—B: Census industry definitions are too broad—N: Census industry definitions are too narrow—I: Imports are a significant fraction of total sales.

Source: "Value-of-Shipments Concentration Ratios by Industry," "Annual Survey of Manufactures," 1966 and 1970. M66(AS)-8 and M70(AS) 9, U.S. Government Printing Office, Washington, D.C., 1968 and 1972.

TABLE 4.—INDUSTRY CONCENTRATION RATIOS FOR SELECTED AGRICULTURAL PRODUCT PROCESSING INDUSTRIES

Classification title	SIC code No.	Values of industry shipments percent accounted for by the 4 largest companies: 1970	1967	1966	1966 [1] adjusted for factors	1963	1958	1954	1947	Factors [1] adjusted for:
Meatpacking plants	2011	23	26	27	(40)	31	34	39	41	R
Sausages and prepared meats	2013	16	15	16	(30–40)	16				R
Poultry dressing plants	2015	16	15	17	(20–30)	14				R
Creamery butter	2021	(2)	15	(2)	(50)	11	11	16	18	R
Cheese, natural and process	2022	43	44	44	(60)	44				R, B
Condensed evaporated milk	2023	39	41	45	(50)	40				R, B
Ice cream and frozen desserts	2024	30	33	33	(70)	37	38	36	40	L
Fluid milk	2026	20	22	23	(60)	23	23	23	22	L
Canned cured seafoods	2031	53	44	42	42	38				
Canned specialties	2032	66	69	63	(80)	67				B
Canned fruits and vegetables	2033	21	22	24	(40)	24				R, B
Dehydrated food products	2034	33	32	31	(50)	37	45	48	56	B
Pickles, sauces, salad dressing	2035	38	33	33	33	36				
Fresh or frozen packaged fish	2036	38	33	33	33	36				
Frozen fruits and vegetables	2037	26	24	24	(40–50)	24				R, B
Flour and grain mill products	2041	30	30	31	(45)	35	38	40	29	R
Prepared feeds	2042	24	23	23	(30–40)	22	22	21	19	R, B
Cereal preparations	2043	90	88	87	87	86	83	88	79	
Rice milling	2044	50	46	45	45	44	43	41	33	
Blended and prepared flour	2045	(2)	68	69	(75)	70				B
Wet corn milling	2046	64	68	67	67	71	73	75	77	
Bread, cake and related products	2051	29	26	25	(50)	23	22	20	16	R, B
Cookies and crackers	2052	59	59	59	(70)	59				B
Raw cane sugar	2061	45	43	50	50	47				
Cane sugar refining	2062	59	59	63	(40)	63				N
Beet sugar	2063	65	66	68	(40)	66	64	66	68	N
Confectionary products	2071	30	25	24	(40–50)	15	18	19	17	B
Chocolate and cocoa products	2072	79	77	78	(85)	75	71	70	68	B
Chewing gum	2073	85	86	88	88	90	89	86	70	
Malt liquors	2082	46	40	29	(65)	34	28	27	21	R
Malt	2083	(2)	39	41	41	38	50	49	49	
Wines, brandy and brandy spirits	2084	(2)	48	41	41	44	35	38	26	B,I
Distilled liquor, except brandy	2085	47	54	55	55	58	60	64	75	B,I
Bottled and canned soft drinks	2086	13	13	14	(30–40)	12	11	10	10	L
Flavoring extracts and sirups	2087	61	67	63	63	62	55	53	50	
Cottonseed oil mills	2091	39	42	38	38	41	42	47	43	
Soybean oil mills	2092	56	55	57	57	50	40	41	44	
Vegetable oil mills	2093	60	56	53	53	38	66			
Animal and marine fats and oils	2094	(2)	28	25	25	23	20			
Roasted coffee	2095	58	53	54	(50–60)	52				B
Shortening and cooking oils	2096	46	43	47	(80–90)	42	44			L
Macaroni and spaghetti	2098	(2)	31	31	31	31	25	25	23	
Food preparations n.e.c	2099	26	24	26	(60–70)	24				B
Cigarettes	2111	84	81	81	81	80	79	82	90	
Cigars	2121	61	59	58	58	59	54	44	41	
Chewing and smoking tobacco	2131	(2)	51	59	59	58	57	58	61	
Tobacco stemming and redrying	2141	66	63	69	(70–80)	70	73	79	88	B
Weaving mills, cotton	2211	33	30	30	(40)	30	25	18		B
Weaving and finishing mills, wool	2231	54	55	56	(50)	51				B
Leather and sheep lined clothing	2386	(2)	24	24	(60)	28	18	18	24	B

[1] Key to symbols: R—Markets are mainly regional in scope; L—Markets are mainly local in scope; B—Census industry definitions are too broad; N—Census industry definitions are too narrow; I—Imports are a significant fraction of total sales.

[2] S—data suppressed because some of the largest companies were approximately the same size as others not included in the sample, and therefore a reliable numerator could not be computed.

Source: "Value-of-Shipments Concentration Ratios by Industry," "Annual Survey of Manufacturers," 1966 and 1970 M66(AS)-8 and M70(AS)-9, U.S. Government Printing Office, Washington, D.C. 1968 and 1972.

THE OPTIONS IN PERSPECTIVE

[By Ronald D. Knutson [1] and Olan D. Forker [2]]

Ten alternative methods of improving the market system for agricultural products have been discussed. Sorting them out and deciding the commodities and conditions to which they are applicable is not an easy task. This paper is designed to put the options in perspective. Its objective is to provide the reader with a basis for comparing the alternatives in terms of: (1) the marketing problems they address, (2) the commodity situations to which they most readily apply, (3) the ability to utilize combinations of alternatives, (4) the distribution of benefits, and (5) the nature of producer initiative needed to obtain the alternative. The reader, of course, will need to make the ultimate decision of which alternatives, and combinations thereof, apply to specific situations.

The Marketing Problems Addressed

Each of the ten alternatives discussed in this series of papers is designed to address particular problems farmers face in marketing their products or purchasing inputs. Five problems appear to be of prime importance:

1. Enhancement of competition among buyers and/or sellers of inputs of farm products, thereby improving the competitive conditions under which products are priced.
2. Improvement of information available to producers and the public, thereby providing a better basis for public and private marketing decisions.
3. Improvement of the balance of market power by increasing the power of producers to give them a market position comparable to that of buyers of farm products or input supplies.
4. Improvement of producer access to markets. Access to a market is improved if there are more alternative outlets which are easier to take advantage of, or if there is a commitment on the part of the buyer to accept the producer's production.
5. Improvement of production coordination with market needs. Improved coordination means that the type, quality, and quantity of produce is more closely associated with market needs.

Table 1 furnishes a summary of the principal impacts of each alternative in providing solutions to each of the five marketing problems. Some of the alternatives contribute only to solving a single problem: mandatory reporting's principal effect is to improve information, and industrial restructuring is designed to enhance competition by breaking up firms from which farmers buy inputs and to which they sell

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their products. On the other hand, electronic auctions have the effect of enhancing competition, improving information, and improving producer market access.

Producer Initiatives Versus Government Involvement

The decision as to whether any of the alternatives are acceptable to producers may hinge on the answers to two important questions:

What type and level of producer initiative is required to get the alternative implemented?

What amount of government involvement in production and marketing decisions is implied by the alternative?

Table 2 provides a comparative analysis of each aspect. To a certain extent, producer initiatives are a substitute for government involvement. For example, ownership integration requires a very high level of producer initiative, both in terms of financial contributions by the producer and his commitment to the market through his organization—with no increased government involvement. An electronic exchange system would require either a commitment from producers to use the system or a marketing order that would require use of the system. Some of the alternatives would require both increased government involvement and producer initiative to make them effective. Exclusive agency bargaining is an example.

TABLE 1.—IMPACT OF MARKETING ALTERNATIVES IN SOLVING 5 PRODUCER MARKETING PROBLEMS

	Impact on marketing problem				
	Enhance competition	Improve information	Balance power	Improve market access	Improve coordination
Marketing alternative:					
Electronic exchange	X	X		X	
Contract markets	X	X		X	X
Mandatory reporting		X			
Exclusive agency bargaining			X		X
Ownership integration			X	X	X
Joint venture				X	X
Marketing orders		X	X		
Marketing boards		X	X		
Industrial restructuring	X		X		
Fine tuning	X	X	X		

TABLE 2.—PRODUCER INITIATIVE AND GOVERNMENT INVOLVEMENT IN MARKETING ALTERNATIVES

Market alternative	Type and level of producer initiative		Level of government involvement
	Financial	Market	
Electronic exchange	Low	Moderate	Moderate.
Forward deliverable contract markets	Low	High	Low-moderate.
Mandatory reporting	None	None	Moderate.
Exclusive agency bargaining	Low	High	Moderate.
Ownership integration	High	High	None.
Joint venture	Moderate	High	None.
Marketing orders	None	Low	High.
Marketing boards	None	Low	High.
Industrial restructuring	None	None	High.
Fine tuning	Low	Low	Low.

Commodity Applications

Some alternatives are more applicable to particular commodity situations than others because of the structure of their markets or their

particular problems. Five major commodities or commodity groups are discussed for illustrative purposes.

Livestock.—Livestock industries, defined here as hogs, cattle and sheep, appear to be at a production-marketing turning point. In each industry pricing becomes a major problem as central markets decline in importance. In each industry many believe there is the threat of vertical integration, whether by contract or ownership similar to what now exists in broilers.

One alternative is to restore competition by restructuring the buyer side of the market and prohibit vertical integration by either packers or ranchers. It seems unlikely this action will be taken; therefore, producers of livestock appear to have the following marketing alternatives: (1) They could recognize integration as a reality and take initiative to develop a producer-owner integrated production-marketing system, including the ownership of packing facilities. (2) Livestock producers could rejuvenate the present marketing and pricing system by establishing a network of electronic exchanges. Such a system has already proved successful in Canada for marketing hogs and, on a much smaller scale, in the United States, for marketing sheep and feeder pigs. In slaughter hogs or cattle a marketing order or board would likely be required to insure success in achieving the desired volume moving over the electronic exchange system. (3) Livestock producers could allow present trends toward contracting to run its course but install a system of mandatory reporting of contract prices, establish a forward deliverable contract market or provide a basis for contract negotiations.

Poultry.—The poultry industry—broilers, turkeys and eggs, has largely run its integration course. The few remaining independent producers have to worry about how they can develop an ownership integrated system to effectively compete and thereby assure market access. Contract growers for integrators have two strategies that could effectively be used in combination: exclusive agency bargaining, and mandatory reporting of contract terms and statistics on internal firm operations of integrators. Alternatively, they could seek an electronic exchange system for forward deliverable contracts designed to foster competition in the contract market.

Fruits and Vegetables.—Processed fruits and vegetables present a situation comparable to poultry with similar alternative solutions, that is, contracting has expanded to the point where the choice for producers is either ownership integration, a forward deliverable contract market, or exclusive agency bargaining with a mandatory reporting system on contract terms and internal firm operations.

Increasingly, fresh fruits and vegetables appear to be moving in the direction of ownership integration of production and shipping functions. Traditionally, marketing orders have been an important tool to guide fresh fruit and vegetable marketing. The use of marketing orders could be expanded to cover greater geographic areas, collect and disseminate more information, help establish remote access exchange mechanisms, or operate forward deliverable contract markets.

Grains.—In grains, export markets have become a prime price-determining factor. These markets are dominated by a few large firms with highly sophisticated intelligence systems. Mandatory reporting of export market transactions has been instituted but has not solved

the problem of equal access to market information. It may never. In this situation, producer alternatives appear to narrow to two: marketing boards representing producers in international transactions, or an effective producer-owned integrated export marketing system.

Cotton.—Alternatives in cotton appear to be more extensive than in grain: an electronic exchange system could, potentially, replace the current spot-price committee system; producers have the option of ownership integration into spinning and fabrics; and mandatory reporting of contract terms may be required if the industry goes the contracting route. There could then be bargaining over the terms of these contracts or a forward deliverable contract market.

Can Combinations Be Used?

It's apparent from the previous discussion of applications to commodity situations that some of the alternatives can be used in combination and, in fact, can complement one another, that is, substantially greater potential producer benefits exist when used in combination than when applied separately. For example, bargaining is complemented by mandatory reporting, marketing orders and marketing boards. On the other hand, bargaining tends to conflict with vertical integration—unless, of course, the bargaining organization is doing the integrating, in which case integration actually complements bargaining.

Industrial restructuring conflicts with alternatives designed to increase producers' market power: vertical integration, bargaining, and joint venture.

Some alternatives can be used in combination in the sense that they neither conflict nor complement; they are relatively neutral with respect to one another. Vertical integration and mandatory reporting, for example, are neutral with respect to each other.

Table 3 is designed to provide a summary of whether each alternative complements, conflicts, or is neutral with respect to other alternatives. Fine tuning is not included in table 3 because it is a combination of many strategies.

How Will Benefits Be Distributed?

In most economic situations one group benefits at the expense of another. Even in cases where substantial efficiency gains exist, more often than not, someone is hurt—squeezed out of business, for example, by the resulting structural change. The trade-offs are not always easy to determine and depend on the specific industry situation. A generalized attempt at determining the distribution of benefits is made in table 4.[3] Benefits may be either positive or negative. A negative benefit means someone is hurt. The more plus signs, the more benefits to the affected parties; the more minus signs, the more affected parties are likely to be adversely affected. Table 4 considers three main groups—producers, agribusiness, and consumers. Agribusiness is divided into supply and marketing firms.

[3] The evaluation here is very subjective and the authors of the other papers in this series would not necessarily agree with the magnitude nor direction of the costs and benefits.

TABLE 3.—USING COMBINATIONS OF ALTERNATIVES MAY COMPLEMENT EACH OTHER OR RESULT IN CONFLICTS AMONG THE ALTERNATIVES

Market alternative	Electronic exchange	Forward deliverable contract markets	Mandatory reporting	Exclusive agency bargaining	Ownership integration	Joint venture orders	Marketing boards	Industrial restructuring
Electronic exchange		Complement	Complement	Conflict	Neutral	Neutral	Complement	Neutral.
Forward deliverable contract markets	Complement		Complement	Conflict	Neutral	Neutral	Complement	Neutral.
Mandatory reporting	Complement	Complement		Complement	Neutral	Neutral	Complement	Complement.
Exclusive agency bargaining	Conflict	Conflict	Complement		Conflict	Conflict	Complement	Conflict.
Ownership integration	Neutral	Neutral	Neutral	Conflict		Neutral	Complement	Conflict.
Joint venture	Neutral	Neutral	Neutral	Conflict	Neutral		Complement	Conflict.
Marketing order	Complement	Complement	Complement	Complement	Complement	Complement	Conflict	Neutral.
Marketing boards	Complement	Complement	Complement	Complement	Complement	Complement	Conflict	Neutral.
Industrial restructuring	Neutral	Neutral	Complement	Conflict	Conflict	Conflict	Neutral	

TABLE 4.—HOW THE BENEFITS OF EACH MARKETING ALTERNATIVE ARE LIKELY TO BE DISTRIBUTED

	Distribution of benefits			
		Agribusiness		
	Producer	Marketing firms	Supply firms	Consumers
Marketing alternatives				
Electronic exchange	+++	− − −	N	++
Forward deliverable contract markets	++	+	N	+
Mandatory reporting	++	−	−	++
Exclusive agency bargaining	+++	− −	N	−−
Ownership integration	++++	− − −	−−	−
Joint venture	++	+	+	−
Marketing orders	+++	− −	N	−−
Marketing boards	+++	− −	N	−−
Industrial restructuring	+	− − − −	−−−−	+++
Fine tuning	++	−−	−	++

Producers' gains using vertical integration, marketing orders, marketing boards, and bargaining are largely at the expense of consumers. With fine tuning, mandatory reporting, industrial restructuring, electronic exchange, and forward deliverable control markets, producers and consumers benefit at the expense of agribusiness. In every alternative except joint venture and contracting, agribusiness marketing firms lose, with the greatest potential loss in ownership integration, industrial restructuring, and electronic exchange systems. Supply firms only experience a large loss in the case of industrial restructuring.

Implication of Benefits for Policy

The distribution of benefits from the alternatives would appear to have substantial policy implications. These implications may be either in terms of the likelihood of getting legislation enacted that would enable the alternative to exist, or the extent to which the public would allow the alternative to become a dominant industry practice or structure. For example, with most of the benefits from vertical integration going to producers, it seems unlikely that the public would allow an industry to be dominated by a single, producer-integrated cooperative. On the other hand, the public might allow—and in fact benefit—from producer integrated cooperatives competing with the corporate agribusiness sector. A strong, integrated, producer grain-export cooperative, for example, could yield substantial producer benefits, hurt current proprietary grain exporters, and be relatively neutral so far as consumers are concerned.

It can be concluded that the public would likely allow producer alternatives such as vertical integration, bargaining, and joint ventures to exist or grow until they begin restricting competition and thus materially hurt consumers. On the other hand, it should be possible to find consumer allies in implementing alternatives such as fine tuning, mandatory reporting, electronic exchange systems, forward deliverable market contracts, or restructuring. Marketing boards, marketing orders, and enabling legislation for exclusive agency bargaining would be difficult to obtain because of possible adverse impact on both agribusiness and consumers.

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